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ABSTRACT

This book is designed to help students in grades 6-8 make better decisions as spenders, savers, borrowers, and managers of money. The learning experiences focus on personal finance and money management. The 10 lessons divided into 4 units include: (1) "Check It Out"; (2) "Party Planners"; (3) "What Would You Do?"; (4) "M&M Interesting"; (5) "The Great Millionaire Race"; (6) "Purchasing Power (Cash vs. Credit)"; (7) "Savers, Bankers, and Borrowers"; (8) "Who Gets the Money?"; (9) "What Works for Us!"; and (10) "At the Margin: Education Pays!" (EH)

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Personal Finance Economics 6-8

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MONEY IN THE MIDDLE

Raymond E. Forgue, Beth Randolph, and Mary Ann Farley

Economics Amer

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PERSONAL FINANCE ECONOMICS, 6-8:

MONEY IN THE MIDDLE

Raymond E. Forgue

Beth Randolph

Mary Ann Farley

EconomicsAmerica

National Council on Economic Education

A partnership of education, business, and labor

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The authors realize that this curriculum guide could not have been created without the assistance of many people. We are deeply appreciative of their generous assistance and acknowledge that these lessons have been strengthened and focused by their contributions. We are especially grateful for the time and effort spent by the middle school teachers who pilot tested the lessons and provided valuable feedback on their efforts.

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FOREWORD

It is a very great pleasure for me as National Council President to introduce the innovative new teaching materials on economics and personal finance which follow.

This project grew out of a shared recognition on the parts of the Consumer Credit Counseling Service (CCCS) and the National Council on Economic Education (NCEE) families that too many young people make personal finance decisions devoid of the powerful understandings provided by economics. As a result, they find themselves victimized by impulse buying, advertising, the lure of credit, limited time horizons, and a host of other forces that weaken their effectiveness in the marketplace. Economics has great power for enhancing decision making by young people in the practical, real-world situations in which they operate. In harnessing economics to that purpose, these materials enhance the ability of all young people to make personal finance decisions that make their lives better.

The materials were developed by the National Council and funded by ten CCCS agencies*: St. Louis, MO; Dallas, TX; Houston, TX; Richmond, VA; Atlanta, GA; Seattle, WA; Baltimore, MD; Columbus, OH; Pittsburgh, PA; and Fort Worth, TX. We are particularly grateful to Mr. C. Philip Johnston, President of the Consumer Credit Counseling Service of St. Louis, for his extraordinary leadership in mobilizing his colleagues around the country in support of this project. We are indebted also to Raymond E. Forgue, Beth Randolph, and Mary Ann Farley, authors of the materials. Their dedication, insight and creativity will become immediately apparent to users in the classroom. We also acknowledge the work of the Oversight Committee of National Council and Consumer Credit professionals, who provided clear and coherent direction to the project, and services too numerous to mention. Finally, we thank Dr. Robert Highsmith, Project Director, for his leadership in bringing the project successfully to completion.

Robert F. Duvall
President

*Members of the National Foundation for Consumer Credit

INTRODUCTION

Personal Finance Economics is a series of high-quality instructional materials that assist all students, kindergarten through grade twelve, in making better decisions as spenders, savers, borrowers, and managers of money. The materials were produced by a partnership of consumer credit and economic education professionals, at the initiation of Stephen Buckles, former President of the National Council on Economic Education (NCEE) and C. Philip Johnston, President of the Consumer Credit Counseling Service (CCCS) of St. Louis.

These materials differ in an important respect from other high-quality teaching aids currently available for enhancing personal finance literacy — they employ economics, sometimes called the science of decision making, to demonstrate how children can effectively prioritize the staggering array of choices facing them when making decisions. In so doing, students learn how to make better decisions and, equally important, to avoid poor ones.

Each of the four publications in the series responds to the same question: how can students use economic knowledge to make better decisions in real-world situations in which they participate as spenders, savers, borrowers, and managers of money? Each publication has two or three lessons on each topic, revealing the power of economic analysis in decision-making situations for students of all ages. The materials were created and field tested by writers and teachers widely recognized for their understanding of children, creative teaching skills, and knowledge of ways to impart economic understanding effectively to young people.

Active learning dominates the materials. Students confront spending, saving, and borrowing choices similar to the ones they face in their daily lives, discover economic concepts that enhance their ability to deal with those choices, participate in classroom activities that use the economic concepts in decision-making situations, and engage in follow-up activities to reinforce their decision-making skills. Most of the lessons prescribe follow-up activities with parents that reinforce at home the skills and understandings learned in the classroom. In brief, students spend their time solving problems which interest them and learning tools that assist them in making better decisions about issues that matter.

Publications in the **Personal Finance Economics** series are available at the primary (K-2), upper elementary (3-5), middle school (6-8), and high school levels (9-12).

Robert Highsmith
Director

OVERVIEW

The middle-school years are marked by the full emergence of youngsters as direct players in our economy. At this age young people also begin to take on the full range of personal finance activities. The natural desire of youngsters at this age to be "grown up" and "mature" makes them eager to know about the financial world they are entering. Thus, it is crucial that they receive information and learn decision-making skills that are based on sound economic principles. Economic principles can empower youngsters to meet the challenges that they will face.

The lessons in this publication focus on personal finance decisions that middle-school students make or will be making in the next few years. Decisions related to spending, saving, credit, and money management are covered with an underlying theme of financial responsibility. The goal of each lesson is to provide a decision-making exercise, thereby enhancing the decision-making skills of the students. The need to "think for yourself" becomes increasingly important for students at this age. This phrase can have two meanings. As commonly used, it means to make your own decisions without relying on the judgment of others. But by placing the emphasis on the words "for yourself," the meaning changes a bit. The focus becomes doing what is best for the person making the decision; that is, making the best decision possible with the information at hand.

The unique feature of this project is the use of economics to enhance the quality of personal finance decisions. The economic framework has a power and precision that brings an added dimension to decision making. Throughout the lessons several key economic concepts are used consistently to "frame" the decision being addressed. These include choice, marginal costs, marginal benefits, opportunity cost, trade-offs, profit, and interdependence.

Middle school marks a time when young people come face to face with scarcity as they recognize first hand that they can't have everything they want. Coming face to face with scarcity leads logically to the concept of choice which means selecting among alternative courses of action. The young person must choose among alternatives without the same level of input from grown-ups that they have known in the past. As choices are made, the youngster must realize that each alternative has costs and benefits. Specifying marginal benefits and marginal costs puts the focus on the specific decision at hand instead of on prior decisions. An additional consideration is the opportunity cost of a decision as measured by the forgone benefits of the second-best alternative. The concept of trade-offs, where a little less of one item is obtained in order to get a little more of another, is also important. As middle-school students take on increasing responsibility for their personal finance decisions, they must learn to look beyond the direct costs of a decision (often the price of a good or service) to the full range of costs implied in the decision.

A key element in the development of personal finance sophistication of middle-school students is their ability to understand the marketplace in which they will be operating. Central to this is an understanding of profit and the role it plays in the operation of firms. Awareness of economic interdependence among businesses and consumers provides a base for the development of financial responsibility among young people.

In summary, the middle-school years provide the major transition from economic childhood to economic adulthood. The personal finance decision-making skills developed at this age create a solid grounding in relevant economic principles. Further, a full understanding of the economic interdependence of businesses and consumers provides a platform for building financial responsibility. The lessons that follow provide concrete decision-making exercises which will develop skills to enable a lifetime of financial success.

LESSON SUMMARIES

LESSON 1
CHECK IT OUT

OBJECTIVES

♦ Identify criteria and list the costs and benefits of alternative choices.

♦ Use product information to identify benefits and costs and then use benefit and cost analysis to make an informed choice among alternatives.

♦ Explain the importance of product information to good consumer decision making and why better information makes for better choices.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Overhead projector and marker
Posterboard (optional)
Zillions magazine

SUBJECTS

Home Economics
Language Arts
Social Studies

CONCEPTS

Benefits
Costs
Product Information

TIME REQUIRED

♦ One fifty-minute class period

DESCRIPTION

This lesson requires students, working in groups, to select a preferred brand/model for two products: book packs and bicycle helmets. They use articles from *Zillions* magazine to gather information concerning the two products. Students establish criteria for their decision and base their decision on the benefits and costs of each brand/model. Students write a rationale for their purchasing decisions based on the benefits and costs and present their decisions to the class.

LESSON 2
PARTY PLANNERS, INC.

OBJECTIVES

♦ Use the concept of trade-offs to make a decision.

♦ Use marginal benefits to choose among alternative combinations.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Calculators (if available)
Overhead projector and pen
Posterboard

SUBJECTS

Art
Home Economics
Language Arts
Mathematics

CONCEPTS

Budget
Marginal Analysis
Trade-offs

TIME REQUIRED

♦ One fifty-minute class period

DESCRIPTION

In this lesson, students learn about trade-offs and marginal benefits by planning a thirteenth-birthday party. While remaining within their budgets, students must choose the activity, party supplies, food, and beverages for the party from a list of available options. Once the party is planned, the groups must present their plan to the class.

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LESSON 3
WHAT WOULD YOU DO?

OBJECTIVE

♦ Use the PACED decision-making model and the concepts of trade-offs and opportunity cost when making a decision.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Overhead projector and pen

SUBJECTS

Home Economics
Mathematics
Social Studies

CONCEPTS

Opportunity Cost
PACED Decision-Making Model
Trade-offs
Decision Making

TIME REQUIRED

♦ Two fifty-minute class periods

DESCRIPTION

In this lesson, students use the PACED decision-making model and the concepts of opportunity cost and trade-offs to make a spending decision. They are given a scenario in which a ninth-grade student must decide whether to buy expensive athletic shoes. If he buys the shoes, he must either forgo participating in a planned class trip to Washington, D.C. or reduce personal spending by two-thirds for three months. After an initial discussion of the scenario, students will be placed in groups to focus on one of the three courses of action available:

1. buy the shoes, maintain personal spending, and forgo the trip;
2. buy the shoes, go on the trip, cut personal spending; or
3. forgo the shoes, go on the trip, maintain personal spending.

Each group must write and present a script of a conversation between the student and one of his friends. The conversation will discuss the decision the student must make. It should follow the PACED decision-making model and include the concepts of trade-offs and opportunity cost.

LESSON 4
M&M INTERESTING

OBJECTIVES

♦ Calculate interest earned and account balances.

♦ Use the concepts of trade-offs and opportunity cost to make a decision.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Calculators (one per group if available)
A 9" x 12" account envelope for each group
Overhead projector and pens
Approximately 900 candies or pretzels
Thirty-six plastic bags filled with 10 candies or pretzels

SUBJECTS

Home Economics
Mathematics

CONCEPTS

Compounding
Compound Interest
Interest
Interest Rate
Opportunity Cost
Simple Interest
Trade-offs

TIME REQUIRED

♦ One fifty-minute class period

DESCRIPTION

This lesson requires students, working in groups, to calculate interest over six deposit cycles. Each of six groups will have the same deposit pattern, but three will have a simple interest account, and three will have a compound interest account. After each cycle, each group will receive its next deposit and its interest for that cycle. At the end of the six cycles, all groups will compare their calculations with other groups in the class. A class discussion will follow that applies the information from the calculations and the concepts of trade-offs and opportunity cost to the task of making the best decision among savings account choices.

LESSON 5
THE GREAT MILLIONAIRE RACE

OBJECTIVES

♦ Explain the impact of amount saved, rate of return, and time for savings accumulation.

♦ Determine marginal benefits and analyze savings decisions.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Overhead projector and pen
Calculators (one for each group if available)

SUBJECTS

Home Economics
Mathematics

CONCEPTS

Compounding
Marginal Benefit
Rate of Return
Return

TIME REQUIRED

♦ One fifty-minute class period

DESCRIPTION

Students are asked to calculate the growth in savings account balances over time given different deposit amounts and different rates of return. Their goal will be to accumulate $1 million as quickly as possible. Working in small groups the students will "race" to be millionaires. Some groups will achieve their goal sooner than others. Other groups will not reach their goal even if they save for 40 years. After completing the activity, students will be introduced to the economic concept of marginal benefit and will use the concept to decide among varying combinations of amounts to save, rates of return, and time periods for a savings plan.

LESSON 6
PURCHASING POWER (CASH VS. CREDIT)

OBJECTIVES

♦ Use opportunity cost to make decisions about using credit or cash.

♦ Use benefits and costs to analyze credit decisions

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
One pair of scissors for each pair of students
Calculators (if available)
Four tables
Overhead projector

SUBJECTS

Home Economics
Mathematics
Social Studies

CONCEPTS

Benefits
Costs
Credit
Interest
Interest Rates
Money
Opportunity Cost

TIME REQUIRED

♦ Two fifty-minute and two twenty-five minute class periods

DESCRIPTION

Students will receive an allowance over the course of four, twenty-minute purchasing periods (twenty minutes = one week). Some students will receive their allowance at the start of the purchasing periods. Others will be given their money at the end of the purchasing periods. The students' task will be to purchase products using cash or credit as appropriate. Certain purchases will be mandatory during each purchasing period, and others will be discretionary. Students will be allowed to purchase items up to but not exceeding their credit limit (set at twice their weekly income). They must pay their entire balance plus interest at the end of the exercise. During the simulation, students will have a chance to replace consumables, accrue interest on credit, and pay off credit purchases. After participating in this activity, students will examine the benefits and costs of credit use.

LESSON 7
SAVERS, BANKERS, AND BORROWERS: A LESSON IN INTERDEPENDENCE

OBJECTIVE

♦ Use opportunity cost and interdependence to make more effective and responsible personal finance decisions related to saving and borrowing.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Overhead projector

SUBJECTS

Home Economics
Language Arts
Mathematics

CONCEPTS

Interdependence
Interest
Opportunity Cost
Profit

TIME REQUIRED

♦ One fifty-minute class period

DESCRIPTION

This lesson begins with an illustration of how savers' deposits are transformed into loans for borrowers. The discussion of this transformation is based on the concept of opportunity cost — banks must pay a level of interest sufficient to cover the opportunity cost of banks plus the opportunity cost of savers. Then students work in groups to determine the interest rate the borrowers must pay in order to cover the opportunity costs of the bank and savers. This interplay of opportunity cost and interest rates results in an interdependence among savers, banks, and borrowers. The students will discuss this interdependence and its role in their decisions to save and borrow responsibly.

LESSON 8
WHO GETS THE MONEY?

OBJECTIVES

♦ Identify the benefits and costs of good and bad credit histories.

♦ Understand how an applicant's credit history affects risk faced by lenders and, thus, their potential profits.

♦ Use the four C's of credit to identify and define the characteristics of applicants used by lenders to decide whether to grant credit, and identify ways that they might use those characteristics to maintain their personal credit-worthiness.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Overhead projector or chalkboard

SUBJECTS

Home Economics
Language Arts
Mathematics

CONCEPTS

Benefits
Costs
Credit
Credit Application
Credit History
Credit Report
Profit
Revenue
Risk

TIME REQUIRED

♦ Two fifty-minute class periods

DESCRIPTION

In this lesson, students discuss the benefits and costs of good and bad credit histories from the perspective of borrowers and lenders. Acting in groups, the students examine loan applications and credit reports of fictional credit applicants to determine the benefits and costs that the particular applicant might pose for a lender and to reach a decision about whether they would lend money to the applicants. This exercise will be followed by a discussion of the decisions reached by the students and the justification for those decisions. The teacher presents the students with the Cs of credit: character, capacity, capital, and collateral. Then the students discuss how they might ensure in the future that they achieve and maintain their own credit-worthiness.

LESSON 9
WHAT WORKS FOR US!

OBJECTIVE

♦ Apply trade-offs and opportunity cost to develop a spending plan.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Calculators (one for every two students if available)
Overhead projector and marker

SUBJECTS

Home Economics
Mathematics
Language Arts

CONCEPTS

Fixed Expenses
Income
Opportunity Cost
Saving
Scarcity
Spending Plan
Trade-offs
Variable Expenses

TIME REQUIRED

♦ Two fifty-minute class periods

DESCRIPTION

The scenario for this lesson involves a young couple being interviewed by the host of a radio show, "What Works for Us," while the couple works on its spending plan. The lesson requires the students to role play a young couple developing a spending plan using the economic concepts of trade-offs and opportunity cost. The spending plan must adjust the young couple's pattern of spending to allow the couple to save an additional $250 per month to meet the goal of having a $3,000 down payment for a new car within one year. Then, working with the couple, the host develops a script and presents the 5-minute show to the class.

LESSON 10
AT THE MARGIN: EDUCATION PAYS!

OBJECTIVE

♦ Apply marginal benefits, marginal costs, opportunity cost, and net benefit to decisions related to spending.

MATERIALS NEEDED

Worksheets and visuals (included with the lesson)
Calculators (one for each group of students if available)
Video camera or audio tape recorder
Overhead projector

SUBJECTS

Home Economics
Language Arts
Mathematics
Social Studies

CONCEPTS

Expenditures
Income
Marginal Benefit
Marginal Cost
Opportunity Cost

TIME REQUIRED

♦ Two fifty-minute class periods

DESCRIPTION

This lesson requires students to develop a 60-second video (or audio) public service announcement (PSA) focusing on the economics of decisions related to staying in high school and seeking post-secondary education. The PSA format and script can be developed by the students, but the information conveyed must relate to the marginal benefits, marginal costs, opportunity cost, and net benefit of the decision to invest in education as measured by its effect on income and expenditures.

CHECK IT OUT

INTRODUCTION

Purpose: In this lesson students use benefit and cost analysis and product information to decide among competing brands/models of items that might be purchased for a visiting exchange student.

Background: The decision-making model used in this lesson (PACED) entails five steps:

1. State the **P**roblem
2. Identify **A**lternative solutions
3. List **C**riteria
4. **E**valuate alternatives using economic concepts
5. Make the **D**ecision

After the decision has been made, a sixth step, "Evaluate the decision," may be employed.

For the purposes of this lesson, the students are asked to use economic tools to make two decisions—what book pack and what bicycle helmet to buy for a visiting foreign exchange student. The alternatives are the various brands/models of these products described in *Zillions* magazine. Effective economic decision making requires that criteria be established and competing brands/models be evaluated. This lesson highlights the benefits and costs of the various alternatives. Specifically, the lesson focuses on steps three, four, and five of the PACED model and pays particular attention to the benefits and costs inherent in product information about the various brands/models.

CONCEPTS

Benefits
Costs
Product Information

OBJECTIVES

♦ Identify criteria and list the benefits and costs of alternative choices.

♦ Use product information to identify benefits and costs and then use benefit and cost analysis to make an informed choice among alternatives.

♦ Explain the importance of product information to good consumer decision making and why better information makes for better choices.

LESSON DESCRIPTION

This lesson requires students, working in groups, to select a preferred brand/model for two products: book packs and bicycle helmets. They use articles from *Zillions* magazine to gather information concerning the two products. They establish criteria, and base their decision on the benefits and costs of each brand/model. Students write a rationale for their purchasing decisions based on the benefits and costs and present their decisions to the class.

TIME REQUIRED

♦ One fifty-minute class period

MATERIALS

One copy of Activity 1 for each student
One copy of Activity 2 for each student
Transparency of Activity 2 (optional)
One copy of Activity 3 for each student
Transparency of Activity 3 (optional)
One copy of Activity 4 for each group
A marker or overhead transparency pen
Packets of informational materials for each group:

Zillions article: "The Melon-Head's Guide to Bike Helmets," June/July 1994, pages 23-25.

Zillions article: "The Book-Pack Torture Test," August/September 1994, pages 18-21.

Zillions article: "Testing Mountain Bikes," June/July 1993, pages 18- 21.

PROCEDURE

1. Set the stage for the lesson by explaining that students will be hosting an exchange student from Ecuador. Distribute a copy of Activity 1 to each student. Instruct students to read the sheet.

2. Explain that to prepare for their guest, students need to select a book pack and a bicycle helmet, but they may not spend more than $60.

3. Explain that students will use the PACED decision-making model to make their selections. Explain the model as follows:

A. State the **P**roblem. (There are many alternatives, but they must purchase a helmet and a book pack for only $60.)

B. Identify **A**lternative solutions. (The alternative helmets and book packs will be listed in the *Zillions* articles.)

C. List **C**riteria. (Criteria are the things that are important to consider when making a decision. Some criteria for selecting the bicycle helmet have been provided.)

D. **E**valuate the alternatives. (The students must determine how well each alternative satisfies the criteria.)

E. Make the **D**ecision. (Students will choose the alternative that best satisfies the criteria.)

4. Distribute a copy of Activity 2 to each student or use it as an overhead transparency. Identify and define *each* criterion for choosing the best bicycle helmet.

5. Ask the students if they have any additional criteria they might suggest for the bicycle helmet.

6. Explain that a specific brand of bicycle helmet may satisfy some criteria but not all. For example, one brand rates "very good" on the strap test and, therefore, would satisfy the "features" criterion. They should select the brand that satisfies the most criteria.

7. Distribute a copy of Activity 3 to each student. Lead students in a discussion to develop criteria for choosing the best book pack. One obvious criterion would be "price." The students should write the criteria identified by the class on the activity sheet.

8. Distribute two or three copies of the *Zillions* articles on book packs and bicycle helmets to each group.

9. Explain that students will read the articles and discuss how well each alternative satisfies the criteria. Remind students that they have a budget of $60.

10. Instruct each group to select a secretary to record their results.

11. Allow time for groups to complete their evaluations.

12. Distribute copies of Activity 4 to each group.

13. Ask the groups to make a decision regarding which book pack and bicycle helmet they would recommend based on the benefits and costs of each alternative.

14. Explain that as each group reaches its decisions, the secretary should complete the "Decision Rationale" sheet with special emphasis on the benefits and costs of the brand chosen.

15. Instruct each group to select one of its members to present its decision to the class.

16. Allow time for each group to make its presentation.

CLOSURE

Review some of the benefits and costs students gave for selecting the products they chose. Ask the students to name some benefits of having the *Zillions* articles before deciding what to buy.

Remind the students that having criteria assisted them in making their decisions. The point should be made that knowing the criteria directs attention to the

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benefits and costs of each alternative, and it is the benefits and costs that aid decision making.

EVALUATION

Explain to students that a local church group has donated the money to buy Miguel a bicycle that he can use while in America and then ship home to Ecuador when he returns. As Miguel's hosts, the students will want to advise him about what bike to buy. Distribute another copy of Activity 3 to each student, and ask them to use the article on mountain bikes from *Zillions* to identify criteria and then list the benefits and costs of the various brands for the criteria identified. Students who are successful with this evaluation should be able to list about five criteria and outline the benefits and costs of various models.

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. On separate slips of paper, write items that middle-school students would be likely to purchase. Ask them to list possible alternative brands, criteria for making the best decision, and sources of information to assist in evaluating the alternatives.

2. Have students identify an item they plan to purchase in the near future. Instruct them to go to the library to find product comparisons and information. Have the students write an advertisement for the product of their choice, explaining the information they have uncovered in their research that highlights some of the benefits of the product.

3. Have the students share their experiences with unsatisfactory products in the past. Have the students consider if seeking additional information about the benefits and costs of that product might have changed their purchase decisions.

PARENTAL INVOLVEMENT

♦ Ask parents to come to class and discuss the steps they used in making a decision about a recent purchase of an automobile, refrigerator, or computer. Ask the parents to discuss the benefits and costs of the brand/model they ultimately selected and how these benefits and costs compared with those of alternatives not chosen. Ask the parents to discuss the sources of information they used to identify the benefits and costs of the alternatives.

RESOURCES

Boush, D.M., Friestad, M., & Rose, G.M. (1994). "Adolescent Skepticism toward TV Advertising and Knowledge of Advertiser Tactics." Journal of Consumer Research, 21, pp. 165-175.

Consumer Advertising, 1990, Order No. CM-207, 156 pp. For price and ordering information, contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611-2053 (904-392-0971). This teacher's guide contains lesson plans specifically designed to help students understand the role of advertising in our economy and its influence on consumer choice. Emphasis is placed on helping students recognize the persuasive intent of advertising and develop requisite analytic skills.

Consumer Economics: Decision-Making, 1990, 75 pp. For price and ordering information, contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611. Eleven lesson plans examine the decision-making process in various situations. Contains reproducibles. Easily adapted to most locales.

Choices and Decisions, 1991. For price and ordering information, contact: Visa Fulfillment, P.O. Box 100, St. Cloud, MN 56302 (800-235-3580). Multi-media instructional package with a 12-lesson curriculum containing paper-based activities, a videodisc game, and five computer-based activities.

ACTIVITY 1
EXCHANGE STUDENT INFORMATION

Miguel (Mé gel) Yacelga (Ya cél ga) is a thirteen-year-old Otavalo Indian. He lives in the city of Otavalo in the South American country of Ecuador. He will come to the United States for a year to experience what life in America is like.

The Otavalo Indians are healthy, ambitious, and, by Indian standards, prosperous. These Indians are skilled weavers of ponchos, sweaters, belts, blankets, wall hangings, and rugs. The Otavalo Indians have preserved their traditional way of dressing. Therefore, Miguel wears a dark poncho, white pants, and sandals woven of vegetable fibers. Both men and women Otavalenos wear their hair in long braids that hang down their backs. Miguel is accustomed to going to the weekly fair on Saturday to sell his family's weaving. He also plays traditional music with members of his family and village friends. He understands English but does not speak it fluently.

Coming to America will bring major changes in Miguel's everyday life. To prepare for his stay, you have already made most of the arrangements. Yet, as a teenager in the United States, he will need several other items which he has not had in Ecuador. First of all, he will be attending school with you and, therefore, will need a book pack to carry his school supplies. You do not have an extra one for him and, thus, will need to purchase one. He will be using this bag every day for a year and wishes to have it to take back with him to Ecuador to show his friends.

Secondly, you have access to a bicycle for Miguel, but he will need a bicycle helmet so that he can go riding with you and the neighborhood kids. This will give him a good chance to experience first-hand an activity many American kids enjoy. He has never had a bicycle to ride, and you know that it will be your responsibility to teach him how to ride safely. You are looking forward to Miguel's year with you. You have studied the photos he sent and are eager to teach him about being an American while learning lots about his life in Ecuador as well.

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Name _____

ACTIVITY 2
SUGGESTED CRITERIA FOR BICYCLE HELMETS

Please describe briefly how well the various brands/models meet the criterion.

Criterion Durability — How well will the product stand up to wear and tear? Will it last a long time without wearing out, breaking down, etc.?

Criterion Safety — Does the product have appropriate safety features? Is it manufactured to conform to safety regulations, if any?

Criterion Styling — Is the product attractive? Is it in style?

ACTIVITY 2 (CONTINUED)

Criterion Features Does the product have the desired components and equipment? Is it designed for ease of use? Will it do the job for which it is intended?

Criterion Price Is the product appropriately priced compared to competing brands/models? Is it a good value for the price?

Criterion _____

Criterion _____

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Name _____

ACTIVITY 3
SUGGESTED CRITERIA FOR _____

For each criterion, please describe briefly how the various brands/models compare. You should be specific about the benefits and costs of the alternative brands/models.

Criterion _____

Benefits **Costs**

Criterion _____

Benefits **Costs**

Criterion _____

Benefits **Costs**

ACTIVITY 3 (CONTINUED)

Criterion _____

Benefits	Costs

Criterion _____

Benefits	Costs

Criterion _____

Benefits	Costs

Criterion _____

Benefits	Costs

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Name _____

ACTIVITY 4
DECISION RATIONALE

Book Pack **Brand/Model Chosen** _____

Our group chose to purchase this product because . . . . (Write a three- or four-sentence summary of your reasons for choosing to purchase the particular brand/model. Your reasoning should focus on the benefits and costs of the brand.)

_____

_____

_____

_____

_____

_____

Bicycle Helmet **Brand/Model Chosen** _____

Our group chose to purchase this product because . . . . (Write a three- or four-sentence summary of your reasons for choosing to purchase the particular brand/model. Your reasoning should focus on the benefits and costs of the brand.)

_____

_____

_____

_____

_____

PARTY PLANNERS

INTRODUCTION

Purpose: In this lesson, students use trade-offs and marginal analysis to make choices from among a "menu" of activities, party supplies, and food items to plan a thirteenth-birthday party.

Background: Economics can be thought of as the study of choices made to satisfy unlimited wants with limited resources. The obvious result of having to make such choices is that some wants will be satisfied to a greater or lesser degree than others. Each consumer purchases a different mix of goods and services, given budget constraints. Making choices involves opportunity costs, where something is given up in order to get something else. However, few choices are all or nothing propositions. They usually involve trade-offs; i.e., a little more of one option in exchange for a little less of something else. Marginal analysis can help in making these choices. It focuses decision making on trade-offs where some quality or quantity of a good or service is forgone in order to gain some quality or quantity of another.

An example of marginal analysis related to quantity might be deciding to take a one-week rather than a two-week vacation in order to have funds for an additional piece of furniture. Or, the decision might be to take a two-week vacation in a less luxurious locale in order to buy the additional furniture. In effect, marginal analysis involves a series of trade-offs in order to fine-tune choices that meet budget constraints and still satisfy wants.

Marginal analysis, fully developed, would normally include the net effects of both marginal benefits and marginal costs. To reduce complexity, this lesson focuses only on the marginal benefits of the options open to the students.

CONCEPTS

Budget
Marginal Analysis
Trade-offs

OBJECTIVES

♦ Use the concept of trade-off to make a decision.

♦ Use marginal benefits to choose among alternative combinations.

LESSON DESCRIPTION

In this lesson, students learn about trade-offs and marginal benefits by planning a thirteenth-birthday party. While remaining within their budgets, students must choose the activity, party supplies, food, and beverages for the party from a list of available options. Once the party is planned, the groups present their plans to the class.

TIME REQUIRED

♦ One fifty-minute class period

MATERIALS

One copy of Activities 5, 6, 7, and 8 for each group of students

One copy of Activity 9 for each student

The students should also have a calculator (if available) and either a piece of posterboard or an overhead transparency and pen so that they can display the decisions made for their party during the presentation phase of the lesson.

PROCEDURE

1. Explain that students will work in groups to plan a birthday party for six. Then they will present their plans to the class. Their task is to plan the party they believe will be the most enjoyable. Thus, the students must choose among various supplies, foods, beverages, and activity options.

2. Divide the class into groups, and distribute Activities 5 and 6 to each group.

3. Tell the students that they will design their party based on information provided on the activity sheets.

4. Choose a budget figure between $40 and $75.

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5. Define a budget as a spending plan with a specific dollar limit.

6. Remind the students that the "best" plan for the party is simply the one that provides the greatest level of satisfaction and stays within budget.

7. Explain that there are two economic concepts that will help them organize their thinking about the party. The concepts are trade-offs and marginal benefits.

8. Define trade-offs as gaining a little more of one option in exchange for a little less of something else. As an example, explain that if their alternatives for party entertainment included watching a movie or swimming, and they chose a short movie, time might allow a brief swim. Party goers would trade-off some movie watching in order to get a little swim time.

9. Define marginal analysis as a tool used to find the most advantageous trade-off among alternatives. Using the party entertainment example, explain that marginal analysis helps students decide what combination of swimming and movie watching gives them the greatest benefit.

10. Explain that marginal analysis allows students to stay within their budget and still have the nicest possible party. As an example, explain that they could have a homemade birthday cake rather than a fancy decorated cake in order to afford more pizza. In order to stay within budget and get the greatest possible enjoyment, students must use marginal analysis to make trade-offs among the various attributes (quantity and quality) of the supplies, foods, beverages, and activities to design a party that would best meet the desires of those in attendance.

11. Distribute Activities 7 and 8 to each group. Explain that they should use Activity 7 to describe their party and Activity 8 to keep track of the trade-offs they make as they use marginal analysis to stay within budget.

12. Designate students in each group to perform the roles of accountant, recorder, presenter, and facilitator (one who makes sure that all stay on task and contribute).

13. Allow the groups 20 minutes to plan their parties and record the trade-offs made.

14. Distribute a copy of Activity 9 to each student. Explain that they will listen to group presentations. As they listen, they should complete this activity by identifying a trade-off they would have made to slightly change the combination of party components selected by each group (see evaluation below).

15. Allow time for each group to describe its party to the class. The group presentations should focus on a description of the party and the information on marginal analysis that the group recorded on Activity 8.

CLOSURE

Debrief the lesson by asking students to enumerate the trade-offs associated with the parties that were planned. For example, one group might have decided to go to a video arcade for the party and traded-off having a birthday cake in order to stay within budget. Another group may have valued food and beverage over activity and traded-off more food for a less expensive activity.

Ask the students to discuss how their personal perspective of what makes a good party affected their marginal analysis.

Close the lesson by repeating the definitions of trade-offs and marginal analysis. Remind students that these economic concepts help people get the most enjoyment or satisfaction from their budgets.

Explain that people define the trade-offs they would make differently based on their own tastes and preferences. There are no right or wrong trade-offs as long as one uses marginal analysis to make choices while staying within budget constraints.

EVALUATION

Collect Activity 9 from the students and review them to ensure that each student correctly indicated

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that a little of one thing is gained by giving up a little of another.

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Have students design parties with different budgets and/or for larger numbers of people. Use marginal analysis and trade-offs to compare these parties to the initial party for six.

2. Instruct students to write letters to parents explaining their personal party choices. The letters should include reasons for their party choices and an explanation of why they made these choices over the other available options. The students must use the terms trade-offs and marginal analysis in their explanations.

3. Ask students for examples of purchases they have made recently. Ask them to share any trade-offs in quantity and/or quality they made in the process of making the purchase decision.

PARENTAL INVOLVEMENT

♦ Have students interview their parents concerning an appropriate budget limit for a birthday party and the type of party their parents would design given the Party Planner Price Lists. Have students report to the class orally or write a short report on how the parents' trade-offs and the student's trade-offs differed.

♦ Have students interview their parents about the trade-offs of a recent purchase decision the parents have made. Ask students to write a brief article on the results of the interview. The article should focus on the trade-offs the parent made to stay within budget.

RESOURCES

Consumer Advertising, 1990, Order No. CM-207, 156 pp. For price and ordering information, contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611-2053 (904-392-0971). This teacher's guide contains lesson plans specifically designed to help students understand the role of advertising in our economy and its influence on consumer choice. Emphasis is on helping students recognize the persuasive intent of advertising and develop requisite analytic skills.

Consumer Economics: Decision-Making, 1990, 75 pp. For price and ordering information, contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611-2053 (904-392-0971). Eleven lesson plans examine the decision-making process in various situations. Easily adapted to most locales.

That's Life, (budgeting game) 1993. For price and ordering information, contact: National Foundation for Consumer Credit, 8611 Second Avenue, Silver Spring, MD 20910 (301-589-5600). *That's Life* explains money and choices for students in grades 6-12.

Toward Being in Charge, 1994. For price and ordering information, contact: The Educational Development and Training Center, East Texas State University (800-356-2644). This program examines budgeting for middle-school students. It includes two lesson plans, posters, and a transparency master to teach wise spending and saving.

Choices and Decisions, 1991. For price and ordering information, contact: Visa Fulfillment, P.O. Box 100, St. Cloud, MN 56302 (800-235-3580). This multimedia instruction package contains 12 lessons featuring paper-based activities, a videodisc game and five computer-based activities.

ACTIVITY 5
FOOD AND BEVERAGE PRICE LIST

FOOD AND BEVERAGE ITEM			PRICE
Pizza			
Brand name			L - $9.00 M - $7.50 S - $5.50
Supermarket (frozen)			L - $6.00 M - $4.75 S - $3.00
Homemade			L - $9.00 M - $7.00 S - $5.00
			(L = 12 PCS; M = 8 PCS; S = 4 PCS)
Hamburger			
Brand name Fast Food Combo-meal			$3.50
Homemade sandwich, fries, and drink			$2.00
Chips			
Brand name	One 16-ounce bag		$3.00
Generic	One 16-ounce bag		$1.75
Cupcakes			
Purchased	Dozen cupcakes		$5.50
Homemade	Dozen cupcakes		$3.50
Brownies			
Purchased	Six brownies		$3.50
Homemade	Six brownies		$2.50
Birthday Cake			
Purchased (Decorated)		One cake - 11" x 14"	$15.00
Homemade		One cake - 11" x 14"	$6.00
Soft Drinks			
Brand name	Two-liter bottle		$1.50
Generic	Two-liter bottle		$1.00
Ice Cream			
Brand name	One-half gallon		$4.00
Generic	One-half gallon		$2.00

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ACTIVITY 6
PARTY SUPPLY & ACTIVITY PRICE LIST

Party Supply	Price
Party Hats	$1.50 for each guest
Streamers	$1.00 per roll
Balloons	$3.00 per dozen
Candles - Basic	$2.00 per dozen
- Deluxe	$4.00 per dozen
Thank-You Notes	$5.00 per dozen

Party Activity	Price (based on a party for six friends)
Swimming Pool (optional: add $1.00-2.50 per person for snacks while swimming)	$12.00
Roller Skating (optional: add $1.00-2.50 per person for snacks while skating)	$20.00
Ice Skating (optional: add $1.00-2.50 per person for snacks while skating)	$35.00
Laser Tag (optional: add $1.00-2.50 per person for snacks while playing Laser Tag)	$40.00
Video Arcade (unlimited games for 2 hours) (optional: add $1.00-2.50 per person for snacks)	$48.00
Movie at a Theater (optional: add $2.00-3.00 per person for snacks)	$21.00
Movies at Home (rental for two movies)	$ 6.00

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ACTIVITY 7
PARTY PLAN WORKSHEET

Group # _____

We propose the following items for our thirteenth-birthday party. As requested, we have kept within the $_____ budget.

Food Item(s)	**Quantity**	**Total Cost**

Beverage Item(s)	**Quantity**	**Total Cost**

Supplies	**Quantity**	**Total Cost**

Activity	**Quantity**	**Total Cost**

TOTAL PARTY COST _____

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ACTIVITY 8
MARGINAL ANALYSIS WORKSHEET

Group # _____

List decisions made for your party and where your group decided to give up a little of one thing (for example, a little less quantity or lower quality food) to get a little more of another (for example, party hats).

By making these small trade-offs at the margin, we were able to stay within budget and still have a great party.

We gave up a little:	**To get a little more:**
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

ACTIVITY 9
MARGINAL ANALYSIS EVALUATION SHEET

For each of the parties described by the groups, suggest one trade-off that you would make to better fit your own idea of what makes a good party.

For the party designed by Group # ____, I:

would give up a little: to get a little more:

For the party designed by Group # ____, I:

would give up a little: to get a little more:

For the party designed by Group # ____, I:

would give up a little: to get a little more:

For the party designed by Group # ____, I:

would give up a little: to get a little more:

For the party designed by Group # ____, I:

would give up a little: to get a little more:

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WHAT WOULD YOU DO?

INTRODUCTION

Purpose: The purpose of this lesson is to teach students to use a decision-making model and the economic concepts of opportunity cost and trade-offs to analyze a consumer spending decision.

Background: Decision making entails selecting among alternative courses of action in order to solve a problem. The PACED decision-making model for this purpose entails five steps:

1. State the **P**roblem
2. Identify **A**lternative solutions
3. List **C**riteria
4. **E**valuate alternatives using economic concepts
5 Make the **D**ecision

After the decision has been made, a sixth step, "Evaluate the decision," may be employed.

The most common error when making personal finance decisions is the failure to consider the full range of choices that is available. Specifically, steps two, three and four of the PACED model are given too little attention. Usually this is because step one is defined so narrowly that there appear to be very few alternatives and the consumer jumps right to step five.

This is especially true when making spending decisions. The key to spending decisions is to maintain the point of view that there are many ways to solve the underlying problem. For example, someone might have a car that is no longer reliable. The person might state the problem narrowly as "I need a new car." Or the person could state it more broadly as "I want more reliable transportation." Note that the latter approach engenders a much broader list of possible solutions.

A corollary issue here is the use of the words "needs" and "wants." As the lesson develops, students might use these words to justify their decisions. However, theoretically, there are no needs. This is because the concept of "need" implies there are no alternatives. And when there are no alternatives there is no opportunity to "decide." Even something as basic as food is largely in the arena of wants. We do need sustenance to survive, but for most Americans the choices of when and what to eat are broad. Steer students away from the use of the word "need" as it limits the development of a full range of alternatives from which to choose.

CONCEPTS

Decision Making
Opportunity Cost
PACED Decision-Making Model
Trade-offs

OBJECTIVE

♦ Use the PACED decision-making model and the concepts of trade-offs and opportunity cost when making a decision.

LESSON DESCRIPTION

In this lesson, students use the PACED decision-making model and the concepts of opportunity cost and trade-offs to make a spending decision. They are given a scenario in which a ninth-grade student must decide whether to buy expensive athletic shoes. If he buys the shoes, he must either forgo participating in a planned class trip to Washington, D.C. or reduce personal spending by two-thirds for three months. After an initial discussion of the scenario, the students will be placed in groups to focus on one of the three courses of action available:

1. buy the shoes, maintain personal spending, and forgo the trip;
2. buy the shoes, go on the trip, cut personal spending; or
3. forgo the shoes, go on the trip, maintain personal spending.

Each group must write and present a script of a conversation between the student and one of his or her friends. The conversation will discuss the decision the student must make. It should follow the PACED decision-making model and include the concepts of trade-offs and opportunity cost.

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LESSON THREE

TIME REQUIRED

♦ Two fifty-minute class periods

MATERIALS

One copy of Activities 10, 11, 12, and 13 for each student

PROCEDURE

1. Distribute a copy of Activity 10 to each student, and describe the scenario faced by Sean Beyer. Ask for suggestions as to what course of action Sean might take. Have the students decide on the best course of action for Sean but keep their decision to themselves until the lesson is completed.

2. Explain that the decision Sean faces is pretty important for his happiness during his freshman year in high school. He must think seriously about it and employ good decision-making techniques if he is to make the best possible decision.

3. Explain that the class is going to use economic concepts to help Sean make his decision.

4. Explain that effective decision making requires careful consideration of opportunity cost and trade-offs.

5. Define opportunity cost as the highest forgone alternative when a decision is made. Discuss:

   A. If Sean chooses to buy the shoes and go on the trip to Washington, D.C., what is his opportunity cost? (personal spending on other items)

   B. If Sean chooses to maintain personal spending and go on the trip to Washington, D.C., what is his opportunity cost? (the new shoes)

   C. If Sean chooses to buy the shoes and maintain personal spending, what is his opportunity cost? (the trip to Washington, D.C.)

6. Distribute a copy of Activity 11 to each student. Briefly discuss the steps with the students.

7. Explain that decisions involve trade-offs among criteria. A trade-off involves giving up some of one thing to obtain some of another.

8. Using the problem on the handout, provide the following examples.

   A. If you choose to ride a bicycle to and from school, you gain convenience and exercise but you give up having protection from bad weather. This is a trade-off.

   B. If you choose to ride the public bus to school, you gain being consistently on time and protection from bad weather, but you give up low cost and exercise. This is a trade-off.

9. Divide the class into six groups. Two groups will be assigned to each course of action available to Sean.

10. Explain that the task for each group is to write and perform a scripted three- to five-minute conversation between Sean and one of his friends. The conversation should be organized so Sean's friend helps him through the steps of the PACED model. Accordingly, the first line of the script should be Sean's friend asking him, "What's the problem, Sean?" The students should follow the PACED steps as an outline for the remainder of their scripts. Point out that a major focus of step four in the PACED model is to determine the trade-off associated with the alternatives. Therefore, students must include trade-offs in their scripts.

11. Explain they should consider the opportunity cost of their decisions. By considering the opportunity cost, they can think carefully about whether the initial choice is truly the best one.

12. Tell the students that as they write the scripts they might change their minds as to what course of action is best for Sean. That is

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acceptable, but they must write their scripts to fit the decision assigned to the group.

13. Distribute a copy of Activities 12 and 13 to each student. Explain that these sheets provide additional information about Sean's situation that may help students write their scripts.

14. Allow time for the groups to rehearse their scripts.

15. Have each group present its conversation to the class. Successful presentations will follow the PACED steps and include a consideration of trade-offs and opportunity cost.

CLOSURE

Lead the class in an evaluative discussion of what they have heard in the conversations presented by the groups. Characterize this discussion as step six in the decision-making process, "evaluate the decision." Ask how many students changed their minds from their original decisions (Procedure 1) about what Sean should do. Ask for factors that led students to change their minds or helped them confirm their original decisions.

Emphasize that in purchasing decisions there are *always* alternatives. Emphasize that the important thing is to make careful decisions using an effective decision-making process.

Explain that it is all right for people to differ in the decisions they make. The PACED model provides the steps and highlights consideration of the trade-offs and opportunity cost involved in making effective decisions. Focusing on trade-offs and opportunity cost can ensure that decisions made are the best ones.

EVALUATION

1. Have students identify an item they have recently purchased. Ask them to generate a list of the alternatives available in this purchasing decision. Have them identify the trade-offs they made in selecting their choice. Have them identify the opportunity costs of the decisions they made. Ask them if knowing the trade-offs and opportunity cost has led them to rethink whether the decisions that they made were good ones.

2. Have students identify an item they want to purchase in the near future. Have them write a persuasive letter to a parent or guardian using the PACED model as an outline. Remind them to specify the trade-offs involved and the opportunity cost of the decisions.

SUGGESTIONS FOR FURTHER ENHANCEMENT

Make a list of items that middle-school students typically purchase as a result of strong peer influence. Make a list of items where peer influence is not strong. Ask students to choose an item from each list and use opportunity cost to assess whether they have made good decisions in the past.

PARENTAL INVOLVEMENT

♦ Ask a parent to come to class to discuss the trade-offs and opportunity cost of a recent purchasing decision.

♦ Have students interview their parents regarding the trade-offs and opportunity cost of a recent purchase decision. Ask students to write a brief article based on the interview using the PACED model as an outline.

RESOURCES

Boush, D.M., Friestad, M., & Rose, G.M. (1994). "Adolescent Skepticism toward TV Advertising and Knowledge of Advertiser Tactics." Journal of Consumer Research, 21, pp. 165-175.

Consumer Advertising, 1990, Order No. CM-207, 156 pp. For price and ordering information, contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611-2053 (904-392-0971). This teacher's guide contains lesson plans specifically designed to help students understand the role of advertising in our economy and its influence on consumer choice. Emphasis is placed on helping students recognize the

persuasive intent of advertising and develop requisite analytic skills.

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Choices and Decisions, 1991. For price and ordering information, contact: Visa Fulfillment, P.O. Box 100, St. Cloud, MN 56302 (800-235-3580). Multimedia instruction package with 12 lessons containing paper-based activities, a videodisc game, and 5 computer-based activities.

ACTIVITY 10 THE CASE OF SEAN BEYER

Sean Beyer is a typical teenager from Illinois about to enter the ninth grade. Sean receives an allowance of $20 per month from his family. He is very industrious and earns about $60 per month from various jobs he performs for family, friends, and neighbors. Sean generally manages his money pretty well and spends it on entertainment, snacks, things to read, and other items typical for a person his age. He really enjoys the freedom that having his own spending money brings. Sean has never really purchased any expensive items with his own money. With school starting, he will have little additional time to earn money but can maintain the same level of earnings as during the past few months.

One of the highlights of the ninth grade at Sean's school is a class trip to Washington, D.C. each March. The stories his friends told him about last year's trip convinced Sean that he had to go. Sean really is looking forward to being able to see the Washington Monument, Lincoln Memorial, and the Smithsonian Museums. There will also be a dinner cruise one evening. Last March, Sean talked it over with his parents and they struck a deal. Sean agreed to save his allowance each month to raise the $180 needed for the deposit on the trip. The deposit is due December 1. His parents agreed to provide the remaining $120 due the week before the trip and to give Sean $30 for spending money while he is in Washington. These funds will not be available to Sean if he does not go on the trip.

It is now the end of August, and Sean's savings plan has gone well until recently. The shoes Sean has been wearing have become a little worn and aren't very stylish. For several weeks, he has been thinking about using his own money to buy a new pair. Several of his best friends recently began wearing Court Rockets shoes. Court Rockets are the latest in athletic shoes. Sean thinks they would make an impression on the other kids at school. Sean knows that his mother would provide him with another pair of shoes eventually, but he really wants to wear Court Rockets on his first day of high school. Court Rockets cost $125 per pair. With the $100 Sean has saved thus far for the trip, his $20 August allowance and $5 from his earnings in August, he has the cash to buy the shoes. Thinking to himself that he could replace the money by December 1, he has almost decided to buy the Court Rockets. If he does, he will need to cut his personal spending drastically to reach his goal of saving $180 by December 1.

ACTIVITY 11
THE PACED DECISION-MAKING MODEL

Making good decisions can be difficult. But like any difficult task, it helps to break things down into a series of steps that can be tackled one at a time. The PACED decision-making model has been developed to do just that. PACED entails five steps:

1. State the **P**roblem
2. Identify **A**lternative solutions
3. List **C**riteria
4. **E**valuate alternatives using economic concepts
5. Make the **D**ecision

Look at a problem that you might have and how it might fit into a PACED model.

1. Problem: You must get yourself to and from school.

2. Alternative Solutions: You could ride with friends or other family members, walk, skate, ride a bicycle, or take a public bus. Obviously, there are other solutions. Note that you are just *listing* solutions here.

3. Criteria: To make a wise choice you need to determine the bases upon which to decide. These are your criteria. For your problem, criteria could include safety, convenience, being consistently on time, protection from bad weather, low cost, and exercise. You could probably think of others. Note that you still haven't evaluated any solutions. You have just thought about the factors you need to consider in making the decision.

4. Evaluate Solutions: Now you can evaluate the alternative solutions. For example, walking might be convenient because you do not have to rely on anyone else and can set your own schedule. It is also inexpensive. But walking is a problem in bad weather. Note that each solution will likely satisfy certain criteria. If you are thinking of riding a bike and do not currently own one, you will have to seek additional information about buying bikes to do your evaluation. Seeking information is a big part of this step. Another important aspect of this step is consideration of the trade-offs involved with each alternative. By considering the trade-offs, you can think carefully about the benefits and costs of each alternative.

5. Decide: This step entails choosing the best alternative solution. No single solution will be perfect, but each has its own strengths and weaknesses. With this step comes the identification of the opportunity cost. By choosing one alternative, you give up the next highest valued alternative.

6. After the decision has been made, you will naturally think about whether you have made the right choice. If things do not work out as you have planned, you have a new problem and will need to go back to step one to solve that problem. If you decided to walk to school, you will have a problem on the first day that it rains. The new problem can be stated as: "I get wet while walking to school."

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ACTIVITY 12
SEAN BEYER'S SAVINGS ACCOUNT

Sean has been saving his $20 monthly allowance since last February. His goal is to have the $180 deposit for his class trip to Washington, D.C. by the December 1 deadline. If he meets his goal, his family will provide the remaining $120 needed for the trip plus $30 spending money. This chart provides his original and revised plans for reaching his goal.

	ORIGINAL PLAN		REVISED PLAN*	
Month	Amount Saved	Account Balance	Amount Saved	Account Balance
March	$20	$ 20	$20	$ 20
April	$20	$ 40	$20	$ 40
May	$20	$ 60	$20	$ 60
June	$20	$ 80	$20	$ 80
July	$20	$100	$20	$100
August	$20	$120	$ 0	$ 0
September	$20	$140	???	????
October	$20	$160	???	????
November	$20	$180	???	????

*Use if Sean buys the shoes. Otherwise, the original plan remains valid.

ACTIVITY 13
INCOME AND EXPENSES FOR SEAN BEYER

Sean Beyer has an income of about $60 per month from lawn mowing, baby sitting, and other work he does for his family and neighbors. He receives a $20 per month allowance, all of which he has been saving for the deposit for his class trip to Washington, D.C. Out of the money that Sean earns, he pays entertainment expenditures, clothing beyond the basics provided by his family, magazines and other reading material, and day-to-day expenses for candy, sodas, and other snacks. Sean keeps a little notebook to record where his money goes. Analysis of the information in the notebook revealed the following pattern for Sean's income and expenditures over the past four months.

Item	May	June	July	August*
Earned Income	$63	$56	$64	$57
Allowance	$20	$20	$20	$20
Expenditures				
Savings	$20	$20	$20	$0
Movies	$5	$9	$14	$6
Skating	$4	$4	$8	$4
Swimming	$0	$3	$7	$10
CDs	$16	$0	$12	$14
Clothing	$12	$22	$0	$125
Magazines	$3	$4	$0	$3
Comic Books	$2	$2	$5	$0
Snacks	$18	$20	$16	$17
	$80	$84	$82	$179

*August spending assumes Sean buys the shoes. Otherwise, his spending pattern will be much like previous months.

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LESSON FOUR

M&M INTERESTING

INTRODUCTION

Purpose: During this lesson students use the economic concepts of trade-offs and opportunity cost to decide between savings accounts with simple interest and those with compound interest.

Background: Depositing funds in savings accounts and other interest bearing accounts is a common financial decision. Basically there are two types of savings accounts: simple interest accounts and compound interest accounts. With a simple interest account, the interest earned is paid periodically to the depositor who can use the funds for current consumption or some other purpose. With a compound interest account, the interest earned is left on deposit to earn interest. The practice of leaving interest on deposit to earn interest is referred to as compounding, and the interest earned is referred to as compound interest.

The essential trade-off between simple interest and compound interest is current consumption versus relatively greater future consumption due to savings growth. The opportunity cost of using a compound interest account is the lost benefits of current consumption made possible by simple interest. The opportunity cost of using a simple interest account is the lost benefits that can be obtained from the next best alternative; i.e., compounding. Explicit use of opportunity cost considerations allow the decision maker to think carefully about these two types of interest.

If interest is withdrawn as it is earned, the balance in the account at any time will be the sum of all deposits into the account (less withdrawals, if any). If interest is left on deposit, the balance in the account at any point would be the sum of all deposits plus interest accumulations (less withdrawals, if any). Note that interest accumulations would include interest earned and retained in the savings account and interest earned on those interest deposits.

CONCEPTS

Compounding
Compound Interest
Interest
Interest Rate
Opportunity Cost
Simple Interest
Trade-offs

OBJECTIVES

- Calculate interest earned on account balances.
- Use the concepts of trade-offs and opportunity cost to make a decision.

LESSON DESCRIPTION

This lesson requires students, working in groups, to calculate interest over six deposit cycles. Each of six groups will have the same deposit pattern, but three will have a simple interest account, and three will have a compound interest account. After each cycle, each group will receive its next deposit and its interest for that cycle. At the end of the six cycles, all groups will compare their calculations with other groups in the class. A class discussion will follow that applies the information from the calculations and the concepts of trade-offs and opportunity cost to the task of making a decision among savings account choices.

To make this exercise come to life for students it is recommended that they receive deposits and interest in some tangible form. Candies such as M&Ms or small, wrapped Tootsie Rolls would work well. Cheerios or pretzel sticks might be a healthier alternative. Each group will have an account envelope to hold its "funds." The simple interest groups should receive their interest as it is earned (eat their interest) and place all deposits in an account envelope. For the compound interest groups, all deposits and interest earnings should be placed in the groups' account envelopes.

TIME REQUIRED

- One fifty-minute class period

LESSON FOUR

MATERIALS

Calculators, if available (at least one for each group)

An account envelope (9" x 12" recommended) for each group

Overhead projector and pens

Copy of Activities 14, 15, and 16 for each student

Approximately 900 candies or pretzels

Transparency of Activities 15 and 16

Thirty-six plastic deposit bags (Sandwich bags would work. Each should be filled in advance with ten candies, pretzels, or other payment.)

One copy of Activity 17 or 18 for each group

Transparency of Activities 17 and 18 Answers

One copy of Activity 19 for each student

One copy of Activity 20 for each student (optional)

PROCEDURE

1. Explain that this lesson is designed to teach students how to decide among types of savings accounts. Ask the students if they have savings accounts. Ask them to define "interest" in their own words. Briefly discuss their definitions.

2. Distribute Activity 14 to each student. The students can use it to reinforce the definitions covered below.

   A. Define the term interest as the price paid for using someone else's money. Explain that when students deposit money in a bank or other financial institution they are, in effect, lending the bank the money. In return for making the loan to the bank they receive interest. Thus, the interest the bank pays on a savings account is the price it must pay to use the saver's money.

   B. Define interest rate as the price one must pay to use someone else's money stated as a percentage.

   C. Define simple interest as interest that is earned and paid out to the depositor. Explain that with simple interest, the interest payments are available to the depositor to spend.

   D. Define compound interest as interest earned when previously earned interest is left on deposit to earn additional interest. Explain that with compound interest, the interest is not paid out to the saver, but is instead held in the savings account where it can earn further interest.

   E. Define compounding as the practice of leaving interest earned on deposit so that it too may earn interest. Reinforce the point that with compounding, interest remains in the account and is not available to spend, but instead earns interest.

3. Review how to change a percentage into a decimal. Go through several examples. For instance,

   10% = 0.10 or just 0.1
   20% = 0.20 or just 0.2
   30% = 0.30 or just 0.3
   40% = 0.40 or just 0.4

4. Explain that students will work in groups to calculate how much interest they will earn on their savings using an interest rate of 30 percent. Explain that 30 percent is much higher than a bank would pay, but it will make the differences between simple and compound interest more obvious.

5. Display a transparency of Activity 15 and distribute a copy of Activity 15 to each student. Explain that it outlines how to calculate interest and account balances for a simple interest account over time. Explain the steps:

   A. Add columns one and two for deposit cycle one and record the answer in column three.

   B. Multiply column three by the decimal equivalent of 30% and record in column

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five. Explain that the example you are using is simple interest so the money would be paid to the depositor who could then spend it.

C. Explain that since the interest is paid out to the depositor the balance at the end is the same figure as in column three and should be recorded in column six as an ending balance. Also, record this balance in column one of deposit cycle two as a beginning balance.

D. Continue completing the table as a class.

6. Display a transparency of Activity 16 and distribute a copy of Activity 16 to each student. Explain that it outlines how to calculate interest and account balances for a compound interest account over time. Explain the steps:

A. Add columns one and two of deposit cycle one and record the answer in column three.

B. Multiply column three by the decimal equivalent of 30% and record in column five. Explain that the example you are using is a compound interest situation; thus, the interest stays in the account.

C. Now add columns three and five and record in column six as an ending balance. Also record this number in column one of deposit cycle two as a beginning balance.

D. Continue completing the table as a class.

7. Divide the class into six nearly equal groups: three for simple interest and three for compound interest. Each group should have a copy of Activity 17 or 18, and a calculator, if available.

8. Explain that the teacher or a student will act as the banker, keeping an account envelope for each group and paying interest out to the groups or depositing it in the account envelope as appropriate.

9. Give the groups six plastic deposit bags.

10. Remind students they can refer to Activity 15 or 16 to review the appropriate calculations.

11. Begin by having a representative of each group bring one plastic deposit bag to place in its account envelope.

12. Give the groups time to do their calculations for each cycle and record their results on the activity sheet. (They should round results to the nearest whole number. If 1.5, 2.5, etc., round down.)

13. As each cycle is calculated and recorded on the activity sheet a member of each group should come to the bank to collect the group's interest or have the interest deposited. While at the bank, the group member should also make the group's deposit and get a plastic bag for the next deposit cycle. Simple interest groups should consume (eat) their interest at the end of each cycle. Compound interest groups should have their interest put into their account envelope. Check to see that the groups are correctly calculating and recording the information on their worksheets.

14. Continue to distribute or deposit interest to each group until all six cycles have been completed. All DEPOSITS should go into the groups' account envelopes.

15. After groups have completed all six cycles and have recorded their results on their activity sheet, distribute the account envelopes to the appropriate groups. Instruct students to open their account envelopes and count their group's candy.

16. Ask the simple interest groups to explain why they only have sixty items in their account envelope even though they earned an additional 63 items in interest. Ask how their account envelope amount might have differed had they not consumed their interest. (They should see they would have

had 123 candies had they not eaten their interest). Ask the compound interest groups to explain why they have 166 items in their account envelope. (They should see that they not only have their interest, but that their interest earned interest.)

17. Show the Answer overhead transparencies for Activities 17 and 18 so that all can see the results. Discuss the generalizations that can be derived:

A. For compound interest groups, previously earned interest is added into the amount on which interest will be calculated the next time.

B. Interest income becomes larger as the total amount on which the interest is calculated gets larger. This is especially beneficial for compound interest groups that earn interest on interest.

18. Define the concept of opportunity cost as the highest forgone alternative when a decision is made.

19. Ask students to identify the opportunity cost of using a simple interest account. (the benefits of the compound interest account)

20. Ask the students to identify the opportunity cost of using a compound interest account. (the benefits enjoyed from spending interest as it is earned)

21. Explain that identifying the opportunity cost of a decision allows a reconsideration of whether the alternative chosen was truly the best.

22. Ask the compound interest groups and simple interest groups if they would do things differently now that they know the opportunity cost of the way they used the interest earned.

23. Define the concept of trade-offs as giving up some of one thing to get some of another. Ask the class to describe the trade-off involved in deciding between a simple interest account and a compound interest account. (The trade-off is between being able to spend interest as it is earned versus earning interest on their interest and having more to spend in the future.)

CLOSURE

Explain that the exercise and calculations they completed using candy yielded information required to make a decision.

Explain that the economic concepts of opportunity cost and trade-offs give them ways to think about the information so that they can arrive at the decision that is best for them.

EVALUATION

1. Distribute a copy of Activity 19 to each student. Instruct students to write or discuss responses as requested on the activity sheet.

2. (Optional) Distribute a copy of Activity 20 to each student. Use it to test the students' understanding of calculating compound interest.

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Have the students graph the savings balances over time for the simple interest and compound interest examples used in this lesson. Ask them to discuss how seeing the results visually might add to their understanding of the trade-offs and opportunity cost of simple versus compound interest.

2. Have students write a letter to a friend describing compound interest and its importance in building savings balances. The letter should include a description of the opportunity cost and trade-offs of simple versus compound interest.

PARENTAL INVOLVEMENT

♦ Ask several parents to visit class on the day of this lesson to help groups with their calculations. Have the parents discuss ways that they use compound interest in their financial planning and what they see as important trade-offs between simple and compound interest.

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♦ Have students ask their parents about situations where they have used simple interest instead of compound interest. Have the students explain to their parents the opportunity cost of using simple interest. The student should then ask the parent for reasons why using simple interest was the best choice given the opportunity cost involved.

RESOURCES

The Savings Zone, 1993, Part 1 - 22 minutes, Part 2 - 50 minutes, VHS. For price and ordering information, contact: National Institute for Consumer Education, Eastern Michigan University, 207 Rackham Building, Ypsilanti, MI 48197 (313-487-2292). In Part 1, three teenage consumers address the problem of obtaining funds for a car. In Part 2, a panel of bankers and high school students comments on the attitudes and behaviors presented in the three scenarios. Kit includes background information, activity sheets, glossary, and a resource list.

Gimme, The Debt Monster. For price and ordering information, contact: CCCS of the Black Hills, P.O. Box 14, Rapid City, SD 57709-0014 (605-348-4550). Scripts for K-6th grade include five topics: wants and needs, savings, spending, responsibility, dealing with peer pressure.

Financial Responsibility Educational Materials. For price and ordering information, contact: Office of Public Responsibility, American Express, 200 Vesey Street, New York, NY 10285-4850 (FAX to 212-640-4443). Program offers a wide variety of materials to help students learn about budgeting, saving, making major purchases, the wise use of credit, and making financial responsibility a habit.

BEST COPY AVAILABLE

ACTIVITY 14
DEFINITIONS

INTEREST	Interest is the price paid for using someone else's money. People who deposit funds with a financial institution such as a bank are lending money to the bank. Those people receive interest.
INTEREST RATE	An interest rate is the price paid for using someone else's money, stated as a percentage.
SIMPLE INTEREST	Simple interest is the interest earned and paid out to the depositor.
COMPOUND INTEREST	Compound interest is the interest earned by leaving interest earned on deposit to earn additional interest.
COMPOUNDING	Compounding is the practice of leaving interest earned on deposit so that it too earns interest.

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ACTIVITY 15
SIMPLE INTEREST

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Earned and Paid Out During Cycle	6 Ending Balance (3*)
1	0	10	10	30%	3	10
2	10	10		30%		
3		10		30%		
4		10		30%		
5		10		30%		
6		10		30%		
Total	n/a		n/a	n/a		n/a

*Since interest is paid out, it is not added to the balance.

ACTIVITY 16
COMPOUND INTEREST

Deposit Cycle	1 - Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Added to the Account During the Cycle	6 Ending Balance (3 + 5)
1	0	10	10	30%	3	13
2	13	10		30%		
3		10		30%		
4		10		30%		
5		10		30%		
6		10		30%		
Total	n/a			n/a		n/a

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ACTIVITY 17
CALCULATION HANDOUT
SIMPLE INTEREST GROUPS

Calculation Grid - 30 Percent Simple Interest

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Earned and Paid Out During Cycle	6 Ending Balance (3*)
1	0	10		30%		
2		10		30%		
3		10		30%		
4		10		30%		
5		10		30%		
6		10		30%		
Total	n/a		n/a	n/a		n/a

*Since interest is paid out, it is not added to the balance.

ACTIVITY 17 (Answers)
CALCULATION HANDOUT
SIMPLE INTEREST GROUPS

Calculation Grid - 30 Percent Simple Interest (Answers)

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Earned and Paid Out During Cycle	6 Ending Balance (3*)
1	0	10	10	30%	3	10
2	10	10	20	30%	6	20
3	20	10	30	30%	9	30
4	30	10	40	30%	12	40
5	40	10	50	30%	15	50
6	50	10	60	30%	18	60
Total	n/a	60	n/a	n/a	63	n/a

*Since interest is paid out, it is not added to the balance.

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ACTIVITY 18
CALCULATION HANDOUT
COMPOUND INTEREST GROUPS

Calculation Grid - 30 Percent Compound Interest

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Added to the Account During the Cycle	6 Ending Balance (3 + 5)
1	0	10		30%		
2		10		30%		
3		10		30%		
4		10		30%		
5		10		30%		
6		10		30%		
Total	n/a		n/a	n/a		n/a

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ACTIVITY 18 (Answers)
CALCULATION HANDOUT
COMPOUND INTEREST GROUPS

Calculation Grid - 30 Percent Compound Interest (Answers)

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Added to the Account During the Cycle	6 Ending Balance (3 + 5)
1	0	10	10	30%	3	13
2	13	10	23	30%	7	30
3	30	10	40	30%	12	52
4	52	10	62	30%	19	81
5	81	10	91	30%	27	118
6	118	10	128	30%	38	166
Total	n/a	60	n/a	n/a	106	n/a

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LESSON FOUR

ACTIVITY 19
EVALUATION EXERCISE

This is the story of the Johnson triplets: BARRY, TERI, and JERRY. They each receive an allowance of $10 per month. It is January, and their family is planning a vacation in August during which they could use a little extra spending money. Their grandmother has agreed to pay each of them 20 percent per month interest on their allowances if they will give their allowances to her for safe keeping until the trip. Once they begin the plan, they will not have any access to the money their grandmother holds. The grandmother has left it up to them as to what to do with the interest. All three kids want to take advantage of their grandmother's offer. However, each will approach it in a slightly different way.

BARRY is thinking of having his grandmother give him his interest each month so that he can have a little spending money until August. He will spend $72 between now and August and would have $80 saved to spend on the trip.

TERI is thinking of having her grandmother give her the interest each month just in case she needs it for something. She really doesn't plan to spend the interest and will put it in her dresser drawer. Assuming she does not spend the interest she would have $152 to spend on the trip ($80 from deposits and $72 from the money stashed in her dresser drawer).

JERRY is planning to have his grandmother keep his interest as well as his allowance. He figures that way he will have $199 for the trip ($80 from deposits and $119 from interest).

1. Which of the Johnson triplets is practicing compounding and which is using simple interest?

2. TERI is the most undecided of the three. What is her trade-off and opportunity cost if she does as she plans versus opting to do things like BARRY?

3. What is TERI's trade-off and opportunity cost if she does as she plans versus opting to do things like JERRY?

ACTIVITY 19 (Answers)
EVALUATION EXERCISE

1. Which of the Johnson triplets is practicing compounding, and which is using simple interest?

Only JERRY is practicing compounding. He is leaving his interest on deposit so that his interest will earn interest. Although TERI is not planning to spend her interest, she is not leaving it on deposit to earn interest. So, she is not practicing compounding.

2. TERI is the most undecided of the three. What is her trade-off and opportunity cost if she does as she plans versus opting to do things like BARRY?

The trade-off involved in deciding between her plan and BARRY's is the $72 she could spend between January and August versus having an additional $72 to spend on the trip. Thus, if TERI opts for her plan versus BARRY's plan, her opportunity cost will be enjoyment from the things she might spend the $72 on before going on the trip.

3. What is her trade-off and opportunity cost if she does as she plans versus opting to do things like JERRY?

The trade-off involved in deciding between her plan and JERRY's is having an additional $47 for the trip versus having some funds available to spend, if desired, between January and August. Thus, if TERI opts for her plan versus JERRY's, her opportunity cost will be the enjoyment from the things she might spend the additional $47 on during the trip.

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ACTIVITY 20
OPTIONAL EVALUATION EXERCISE

Calculation Grid - 10 Percent Compound Interest

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Added to the Account During the Cycle	6 Ending Balance (3 + 5)
1	0	30		10%		
2		30		10%		
3		30		10%		
4		30		10%		
5		30		10%		
6		30		10%		
Total	n/a		n/a	n/a		n/a

ACTIVITY 20 (Answers)
OPTIONAL EVALUATION EXERCISE

Calculation Grid - 10 Percent Compound Interest

Deposit Cycle	1 Beginning Balance	2 Plus Deposited Amount	3 Equals Balance to Earn Interest (1 + 2)	4 Times the Rate of Interest	5 Equals Interest Added to the Account During the Cycle	6 Ending Balance (3 + 5)
1	0	30	30	10%	3	33
2	33	30	63	10%	6	69
3	69	30	99	10%	10	109
4	109	30	139	10%	14	153
5	153	30	183	10%	18	201
6	201	30	231	10%	23	254
Total	n/a	180	n/a	n/a	74	n/a

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LESSON FIVE

THE GREAT MILLIONAIRE RACE

INTRODUCTION

Purpose: During this lesson students use the economic concept of marginal benefit to make decisions concerning the dollar amount to save, for how long, and at what rate of return. The concept of marginal benefit helps them see that maximum return is achieved by saving for long periods of time, with large deposits, and at high interest rates.

Background: Three variables affect how savings grow and the level of total value achieved. These variables are: (1) the dollar amount saved at intervals over time, (2) the rate of return earned on the deposited funds, and (3) the time period over which deposits are made. By calculating the rate at which savings grow for various dollar amounts deposited, varying rates of return, and varying time periods, one can determine the marginal benefit of differing combinations of these three variables to assist personal finance decision making.

CONCEPTS

Compounding
Marginal Benefit
Rate of Return
Return

OBJECTIVES

♦ Explain the impact of amount saved, rate of return, and time on savings accumulation.

♦ Determine marginal benefits and analyze savings decisions.

LESSON DESCRIPTION

Students are asked to calculate the growth in savings account balances over time given different deposit amounts and different rates of return. Their goal will be to accumulate $1 million as quickly as possible. Working in small groups, students will "race" to become millionaires. Some groups will achieve their goal sooner than others. Other groups will not reach their goal even if they save for 40 years.

After completing the activity, students will be introduced to the economic concept of marginal benefit and will use the concept to decide among varying combinations of amounts to save, rates of return, and time periods for a savings plan.

TIME REQUIRED

♦ One fifty-minute class period

MATERIALS

One copy of Activity 21 cut into 8 rectangles (one for each group)

One copy of Activity 22 for each group with the first year's figures completed

One set of Answer Sheets for groups 1 through 8, respectively

One copy of Activities 23 and 24 for each student

Transparencies for each of the above items (optional)

Calculators (optional)

PROCEDURE

1. Ask the following questions:

   A. How would you spend $1 million? (Answers will vary.)

   B. How many of you think you will earn $1 million in your lifetime? (Answers will vary.)

2. Explain that most of the students will be able to earn $25,000 per year by the time they are twenty-five years old. If they earn that much each year for 40 years until they retire, they WILL earn $1 million during their lifetime. Then ask how many think they will HAVE $1 million at any point in their lives.

3. Explain that this lesson is designed to show them the kinds of decisions they can make to

actually have $1 million someday. It might take a long time, but it is possible.

4. Explain that they will be completing an exercise to illustrate how savings can grow over time when savers make regular deposits and earn a return on their savings.

5. Explain that "return" is a general term for the earnings received for saved funds. For example, the dollar amount of interest earned on money placed in a savings account is a return. The money earned from owning stock in a company is a return.

6. Explain that when the return is stated as a percentage rate, it is called a rate of return. So, people earn a particular rate of return (interest) on their savings.

7. Explain that a key to successfully reaching $1 million is placing the return on savings back into the savings account rather than spending it. This practice of saving the return is called compounding. It is sometimes referred to as earning interest on interest.

8. Explain that when calculating a return, the rate of return must be written as a decimal. For instance,

10% = 0.10 or just 0.1
25% = 0.25
40% = 0.40 or just 0.4

9. Divide the class into eight groups. Cut Activity 21 apart and distribute one slip to each group.

10. Display an overhead of Activity 21 and discuss the following:

A. How long do you think it will take the groups to get $1 million? (Answers will vary.)

B. Which group might reach $1 million first? (Answers will vary.)

11. Explain that the groups are going to complete calculations so they can answer these questions.

12. Distribute a copy of Activity 22 to each group. Tell the students that their task is to complete the sheet to see which group is first to reach the goal of becoming a millionaire, before taxes. It is the Great Millionaire Race!

13. Review the sheet as follows:

A. Column 1 designates the year each deposit is made.

B. Column 3 designates the amounts deposited.

C. Column 5 includes the rate of return. It may list 1.06 or 1.10, depending on the group. One is added to the decimal rate of return to save the step of adding the balance to the return earned in a given year.

14. Demonstrate how to complete Activity 22 by modeling year 1 as follows:

A. Add the numbers in columns 2 and 3 and record the result in column 4.

B. Multiply the amount in column 4 by one plus the rate of return (column 5), and record the result in column 6 of year 1 and in column 2 of year 2.

15. Explain that students should repeat the cycle to complete the calculations for all 40 years of deposits. Some groups will exceed $1 million.

16. Remind students that it takes time to accumulate $1 million, but that it is possible.

17. After the groups have had an opportunity to complete the work, distribute a copy of Activity 23 to each student. Explain that as the groups report, students should record the necessary information on this sheet.

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18. Allow time for the groups to report their results. Each group should point out the amount of its annual rate of return, whether its members became millionaires, and, if so, how many years it took to accumulate $1 million.

19. Explain that the marginal benefit of doing something is the extra or additional benefit you receive. In this case, the marginal benefit is the additional benefit received for depositing higher dollar amounts, earning higher rates of return, and saving for additional years.

20. Display a transparency of Activity 23 and discuss the following:

A. Assuming no taxes, what is the marginal benefit of saving $3,000 instead of $2,000 per year at 6% interest for 40 years? ($164,047.70)

Assuming no taxes, what is the marginal benefit of saving $4,000 instead of $3,000? ($164,047.61)

Assuming no taxes, what is the marginal benefit of saving $5,000 instead of $4,000? ($164,047.69)

B. Assuming no taxes, what is the marginal benefit of saving $2,000 per year at 10% instead of 6% interest for 40 years? ($545,608.36)

Assuming no taxes, what is the marginal benefit of saving $3,000 per year at 10% instead of 6% interest for 40 years? ($968,412.49)

Assuming no taxes, what is the marginal benefit of saving $4,000 per year at 10% instead of 6% interest for 40 years? ($1,291,216.55)

Assuming no taxes, what is the marginal benefit of saving $5,000 per year at 10% instead of 6% interest for 40 years? ($1,619,021.64)

21. Display a transparency of the answer sheet for group 6. Ask the students to indicate the marginal benefit of continuing to save from year 34 to year 35. (It is $112,409.75, which is $1,192,507.24 minus $1,080,097.49.)

22. Point out that only $4,000 of this additional savings came from deposits. The remainder, over $108,000, was money from previous savings. This marginal benefit shows the awesome power of compounding.

23. Continue to use this answer sheet to illustrate the magnitude of year-to-year marginal benefits when ending balances are high.

CLOSURE

Ask students what information an understanding of marginal benefits provides regarding how much to save, at what rate of return to save, and how long to save. (They should explain that higher rates of return allow faster growth; the larger the account balance on which return is figured, the faster the growth; maintaining an account over a longer period of time increases the amount accumulated; and amounts earned in previous periods become part of the account balance on which returns are calculated.)

Explain that one of the most powerful discoveries of this activity was the marginal benefit of saving regularly for long periods of time.

Explain that long time periods can make up for low amounts saved each year. For example, depositing $100 per month at a 10% rate of return will yield $1,000,000 in 47 years. This means if students save $100 per month at a 10% rate of return starting at age 18, they can have one-million dollars before taxes when they retire. If they wait ten years until age 28, they will have to save $275 each month to become millionaires. The key is to start early even if only a little can be saved.

EVALUATION

Distribute a copy of Activity 24. Read the directions. Discuss the three situations or ask students to write responses to the questions and then discuss their answers.

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Have students conduct a survey of savings institutions to find out the rates of return for various savings plans. Also, have them call several stock brokerage firms and ask for current rates of return on corporate bonds and the long-term average return on investments in common stock.

2. Ask students to prepare a brochure to market a particular savings plan identified above. In the brochure, students should make a chart showing the interest earned over a set period of years for at least two of the savings plans identified. In a class presentation, students should try to convince their classmates to place funds in the savings plan with the highest rate of return by showing the marginal benefit for specific dollar amounts saved and differing time periods.

3. Have students make a bar graph of the Ending Account Balances after 10, 20, 30, and 40 years for the $3,000.00 savings at the various rates of return of 6%, 8% (an additional set of calculations would be needed), and 10%. Have them explain in a paragraph or two why the figures vary so much and the marginal benefits of the differing time periods.

PARENTAL INVOLVEMENT

♦ Using their summary sheets and answer sheets as a reference, have students discuss with their parents the marginal benefits of long-term saving. Have parents and students discuss possible saving strategies.

♦ Ask a parent who works in banking to talk to the class about the marginal benefits of regular saving and the rates of return that can be expected over time from various savings plans.

♦ Ask students to discuss with their parents the marginal benefits available from engaging in a long-term savings program. This might include a retirement plan through their employer, saving for the child's education, or some other regular savings program used by the parent.

RESOURCES

The Savings Zone, 1993, Part 1 - 22 minutes, Part 2 - 50 minutes, VHS. For price and ordering information, contact: National Institute for Consumer Education, Eastern Michigan University, 207 Rackham Building, Ypsilanti, MI 48197 (313-487-2292). In Part 1, three teenaged consumers address the problem of obtaining funds for a car. In Part 2, a panel of bankers and high school students comments on the attitudes and behaviors presented in the three scenarios. The kit includes background information, activity sheets, glossary, and a resource list.

Gimme, The Debt Monster. For price and ordering information, contact: CCCS of the Black Hills, P.O. Box 14, Rapid City, SD 57709-0014 (605-348-4550). The scripts, K-6th grade, cover 5 topics: wants and needs, savings, spending, responsibility, and dealing with peer pressure.

Financial Responsibility Educational Materials. For price and ordering information, contact: Office of Public Responsibility, American Express, 200 Vesey Street, New York, NY 10285-4850 (FAX to 212-640-4443). The program offers a wide variety of materials to help students learn about budgeting, saving, making major purchases, the wise use of credit, and making financial responsibility a habit.

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ACTIVITY 21
DEPOSIT AMOUNT AND RATE OF RETURN ASSIGNMENTS

Group #1 Annual Deposit - $2,000 Rate of Return - 6 Percent	Group #2 Annual Deposit - $2,000 Rate of Return - 10 Percent
Group #3 Annual Deposit - $3,000 Rate of Return - 6 Percent	Group #4 Annual Deposit - $3,000 Rate of Return - 10 percent
Group #5 Annual Deposit - $4,000 Rate of Return - 6 Percent	Group #6 Annual Deposit - $4,000 Rate of Return - 10 Percent
Group #7 Annual Deposit - $5,000 Rate of Return - 6 Percent	Group #8 Annual Deposit - $5,000 Rate of Return - 10 Percent

BEST COPY AVAILABLE

ACTIVITY 22
MASTER CALCULATION GRID

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
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39					
40					

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ACTIVITY 22

ANSWERS FOR GROUP 1

$2,000 AT 6% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$2,000.00	$2,000.00	1.06	$2,120.00
2	2,120.00	2,000.00	4,120.00	1.06	4,367.20
3	4,367.20	2,000.00	6,367.20	1.06	6,749.23
4	6,749.23	2,000.00	8,749.23	1.06	9,274.18
5	9,274.00	2,000.00	11,274.18	1.06	11,950.63
6	11,950.63	2,000.00	13,950.63	1.06	14,787.67
7	14,787.67	2,000.00	16,787.67	1.06	17,794.93
8	17,794.93	2,000.00	19,794.93	1.06	20,982.63
9	20,982.63	2,000.00	22,982.63	1.06	24,361.59
10	24,361.59	2,000.00	26,361.59	1.06	27,943.29
11	27,943.29	2,000.00	29,943.29	1.06	31,739.89
12	31,739.89	2,000.00	33,739.89	1.06	35,764.28
13	35,764.28	2,000.00	37,764.28	1.06	40,030.14
14	40,030.14	2,000.00	42,030.14	1.06	44,551.95
15	44,551.95	2,000.00	46,551.95	1.06	49,345.07
16	49,345.07	2,000.00	51,345.07	1.06	54,425.77
17	54,425.77	2,000.00	56,425.77	1.06	59,811.32
18	59,811.32	2,000.00	61,811.32	1.06	65,520.00
19	65,520.00	2,000.00	67,520.00	1.06	71,571.20
20	71,571.20	2,000.00	73,571.20	1.06	77,985.47
21	77,985.47	2,000.00	79,985.47	1.06	84,784.60
22	84,784.60	2,000.00	86,784.60	1.06	91,991.68
23	91,991.68	2,000.00	93,991.68	1.06	99,631.18
24	99,631.18	2,000.00	101,631.18	1.06	107,729.05
25	107,729.05	2,000.00	109,729.05	1.06	116,312.79
26	116,312.79	2,000.00	118,312.79	1.06	125,411.56
27	125,411.56	2,000.00	127,411.56	1.06	135,056.25
28	135,056.25	2,000.00	137,056.25	1.06	145,279.63
29	145,279.63	2,000.00	147,279.63	1.06	156,116.41
30	156,116.41	2,000.00	158,116.41	1.06	167,603.39
31	167,603.39	2,000.00	169,603.39	1.06	179,779.59
32	179,779.59	2,000.00	181,779.59	1.06	192,686.37
33	192,686.37	2,000.00	194,686.37	1.06	206,367.55
34	206,367.55	2,000.00	208,367.55	1.06	220,869.60
35	220,869.60	2,000.00	222,869.60	1.06	236,241.78
36	236,241.78	2,000.00	238,241.78	1.06	252,536.28
37	252,536.28	2,000.00	254,536.28	1.06	269,808.46
38	269,808.46	2,000.00	271,808.46	1.06	288,116.97
39	288,116.97	2,000.00	290,116.97	1.06	307,523.99
40	307,523.99	2,000.00	309,523.99	1.06	328,095.42

ACTIVITY 22

ANSWERS FOR GROUP 2

$2,000 AT 10% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$2,000.00	$2,000.00	1.10	$2,200.00
2	2,200.00	2,000.00	4,200.00	1.10	4,620.00
3	4,620.00	2,000.00	6,620.00	1.10	7,282.00
4	7,282.00	2,000.00	9,282.00	1.10	10,210.20
5	10,210.20	2,000.00	12,210.20	1.10	13,431.22
6	13,431.22	2,000.00	15,431.22	1.10	16,974.34
7	16,974.34	2,000.00	18,974.34	1.10	20,871.77
8	20,871.77	2,000.00	22,871.77	1.10	25,158.95
9	25,158.95	2,000.00	27,158.95	1.10	29,874.85
10	29,874.85	2,000.00	31,874.85	1.10	35,062.34
11	35,062.34	2,000.00	37,062.34	1.10	40,768.57
12	40,768.57	2,000.00	42,768.57	1.10	47,045.43
13	47,045.43	2,000.00	49,045.43	1.10	53,949.97
14	53,949.97	2,000.00	55,949.97	1.10	61,544.97
15	61,544.97	2,000.00	63,544.97	1.10	69,899.47
16	69,899.47	2,000.00	71,899.47	1.10	79,089.42
17	79,089.42	2,000.00	81,089.42	1.10	89,198.36
18	89,198.36	2,000.00	91,198.36	1.10	100,318.20
19	100,318.20	2,000.00	102,318.20	1.10	112,550.02
20	112,550.02	2,000.00	114,550.02	1.10	126,005.02
21	126,005.02	2,000.00	128,005.02	1.10	140,805.52
22	140,805.52	2,000.00	142,805.52	1.10	157,086.07
23	157,086.07	2,000.00	159,086.07	1.10	174,994.68
24	174,994.68	2,000.00	176,994.68	1.10	194,694.15
25	194,694.15	2,000.00	196,694.15	1.10	216,363.57
26	216,363.57	2,000.00	218,363.57	1.10	240,199.93
27	240,199.93	2,000.00	242,199.93	1.10	266,419.92
28	266,419.92	2,000.00	268,419.92	1.10	295,261.91
29	295,261.91	2,000.00	297,261.91	1.10	326,988.10
30	326,988.10	2,000.00	328,988.10	1.10	361,886.91
31	361,886.91	2,000.00	363,886.91	1.10	400,275.60
32	400,275.60	2,000.00	402,275.60	1.10	442,503.16
33	442,503.16	2,000.00	444,503.16	1.10	488,953.48
34	488,953.48	2,000.00	490,953.48	1.10	540,048.82
35	540,048.82	2,000.00	542,048.82	1.10	596,253.71
36	596,253.71	2,000.00	598,253.71	1.10	658,079.08
37	658,079.08	2,000.00	660,079.08	1.10	726,086.99
38	726,086.99	2,000.00	728,086.99	1.10	800,895.68
39	800,895.68	2,000.00	802,895.68	1.10	883,185.25
40	883,185.25	2,000.00	885,185.25	1.10	973,703.78

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ACTIVITY 22

ANSWERS FOR GROUP 3
$3,000 AT 6% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$3,000.00	$3,000.00	1.06	$3,180.00
2	3,180.00	3,000.00	6,180.00	1.06	6,550.80
3	6,550.80	3,000.00	9,550.80	1.06	10,123.85
4	10,123.85	3,000.00	13,123.85	1.06	13,911.28
5	13,911.28	3,000.00	16,911.28	1.06	17,925.96
6	17,925.96	3,000.00	20,925.96	1.06	22,181.52
7	22,181.52	3,000.00	25,181.52	1.06	26,692.41
8	26,692.41	3,000.00	29,692.41	1.06	31,473.95
9	31,473.95	3,000.00	34,473.95	1.06	36,542.39
10	36,542.39	3,000.00	39,542.39	1.06	41,914.93
11	41,914.93	3,000.00	44,914.93	1.06	47,609.83
12	47,609.83	3,000.00	50,609.83	1.06	53,646.42
13	53,646.42	3,000.00	56,646.42	1.06	60,045.21
14	60,045.21	3,000.00	63,045.21	1.06	66,827.92
15	66,827.92	3,000.00	69,827.92	1.06	74,017.60
16	74,017.60	3,000.00	77,017.60	1.06	81,638.66
17	81,638.66	3,000.00	84,638.66	1.06	89,716.98
18	89,716.98	3,000.00	92,716.98	1.06	98,280.00
19	98,280.00	3,000.00	101,280.00	1.06	107,356.80
20	107,356.80	3,000.00	110,356.80	1.06	116,978.21
21	116,978.21	3,000.00	119,978.21	1.06	127,176.90
22	127,176.90	3,000.00	130,176.90	1.06	137,987.51
23	137,987.51	3,000.00	140,987.51	1.06	149,446.76
24	149,446.76	3,000.00	152,446.76	1.06	161,593.57
25	161,593.57	3,000.00	164,593.57	1.06	174,469.18
26	174,469.18	3,000.00	177,469.18	1.06	188,117.33
27	188,117.33	3,000.00	191,117.33	1.06	202,584.37
28	202,584.37	3,000.00	205,584.37	1.06	217,919.43
29	217,919.43	3,000.00	220,919.43	1.06	234,174.60
30	234,174.60	3,000.00	237,174.60	1.06	251,405.08
31	251,405.08	3,000.00	254,405.08	1.06	269,669.38
32	269,669.38	3,000.00	272,669.38	1.06	289,029.54
33	289,029.54	3,000.00	292,029.54	1.06	309,551.31
34	309,551.31	3,000.00	312,551.31	1.06	331,304.39
35	331,304.39	3,000.00	334,304.39	1.06	354,362.65
36	354,362.65	3,000.00	357,362.65	1.06	378,804.41
37	378,804.41	3,000.00	381,804.41	1.06	404,712.67
38	404,712.67	3,000.00	407,712.67	1.06	432,175.43
39	432,175.43	3,000.00	435,175.43	1.06	461,285.96
40	461,285.96	3,000.00	464,285.96	1.06	492,143.12

ACTIVITY 22

ANSWERS FOR GROUP 4

$3,000 AT 10% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$3,000.00	$3,000.00	1.10	$3,300.00
2	3,300.00	3,000.00	6,300.00	1.10	6,930.00
3	6,930.00	3,000.00	9,930.00	1.10	10,923.00
4	10,923.00	3,000.00	13,923.00	1.10	15,315.30
5	15,315.30	3,000.00	18,315.30	1.10	20,146.83
6	20,146.83	3,000.00	23,146.83	1.10	25,461.83
7	25,461.51	3,000.00	28,461.51	1.10	31,307.66
8	31,307.66	3,000.00	34,307.66	1.10	37,738.43
9	37,738.43	3,000.00	40,738.43	1.10	44,812.27
10	44,812.27	3,000.00	47,812.27	1.10	52,593.50
11	52,593.50	3,000.00	55,593.50	1.10	61,152.85
12	61,152.85	3,000.00	64,152.85	1.10	70,568.14
13	70,568.14	3,000.00	73,568.14	1.10	80,924.95
14	80,924.95	3,000.00	83,924.95	1.10	92,317.45
15	92,317.45	3,000.00	95,317.45	1.10	104,849.20
16	104,849.20	3,000.00	107,849.20	1.10	118,634.12
17	118,634.12	3,000.00	121,634.12	1.10	133,797.53
18	133,797.53	3,000.00	136,797.53	1.10	150,477.28
19	150,477.28	3,000.00	153,477.28	1.10	168,825.01
20	168,825.01	3,000.00	171,825.01	1.10	189,007.51
21	189,007.51	3,000.00	192,007.51	1.10	211,208.26
22	211,208.26	3,000.00	214,208.26	1.10	235,629.09
23	235,629.09	3,000.00	238,629.09	1.10	262,492.00
24	262,492.00	3,000.00	265,492.00	1.10	292,041.20
25	292,041.20	3,000.00	295,041.20	1.10	324,545.32
26	324,545.32	3,000.00	327,545.32	1.10	360,299.85
27	360,299.85	3,000.00	363,299.85	1.10	399,629.84
28	399,629.84	3,000.00	402,629.84	1.10	442,892.82
29	442,892.82	3,000.00	445,892.82	1.10	490,482.10
30	490,482.10	3,000.00	493,482.10	1.10	542,830.31
31	542,830.31	3,000.00	545,830.31	1.10	600,413.34
32	600,413.34	3,000.00	603,413.34	1.10	663,754.67
33	663,754.67	3,000.00	666,754.67	1.10	733,430.14
34	733,430.14	3,000.00	736,430.14	1.10	810,073.15
35	810,073.15	3,000.00	813,073.15	1.10	894,380.47
36	894,380.47	3,000.00	897,380.47	1.10	987,118.52
37	987,118.52	3,000.00	990,118.52	1.10	1,089,130.37
38	1,089,130.37	3,000.00	1,092,130.37	1.10	1,201,343.41
39	1,201,343.41	3,000.00	1,204,343.41	1.10	1,324,777.75
40	1,324,777.75	3,000.00	1,327,777.75	1.10	1,460,555.51

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ACTIVITY 22

ANSWERS FOR GROUP 5
$4,000 AT 6% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$4,000.00	$4,000.00	1.06	$4,240.00
2	4,240.00	$4,000.00	8,240.00	1.06	8,734.40
3	8,734.40	$4,000.00	12,734.40	1.06	13,498.46
4	13,498.46	$4,000.00	17,498.46	1.06	18,548.37
5	18,548.37	$4,000.00	22,548.37	1.06	23,901.27
6	23,901.27	$4,000.00	27,901.27	1.06	29,575.35
7	29,575.35	$4,000.00	33,575.35	1.06	35,589.87
8	35,589.87	$4,000.00	39,589.87	1.06	41,965.26
9	41,965.26	$4,000.00	45,965.26	1.06	48,723.18
10	48,723.18	$4,000.00	52,723.18	1.06	55,886.57
11	55,886.57	$4,000.00	59,886.57	1.06	63.479.76
12	63.479.76	$4,000.00	67.479.76	1.06	71,528.55
13	71,528.55	$4,000.00	75,528.55	1.06	80,060.26
14	80,060.26	$4,000.00	84,060.26	1.06	89,103.88
15	89,103.88	$4,000.00	93,103.88	1.06	98,690.11
16	98,690.11	$4,000.00	102,690.11	1.06	108,851.52
17	108,851.52	$4,000.00	112,851.52	1.06	119,622.61
18	119,622.61	$4,000.00	123,622.61	1.06	131,039.97
19	131,039.97	$4,000.00	135,039.97	1.06	143,142.37
20	143,142.37	$4,000.00	147,142.37	1.06	155,970.91
21	155,970.91	$4,000.00	159,970.91	1.06	169,569.16
22	169,569.16	$4,000.00	173,569.16	1.06	183,983.31
23	183,983.31	$4,000.00	187,983.31	1.06	199,262.31
24	199,262.31	$4,000.00	203,262.31	1.06	215,458.05
25	215,458.05	$4,000.00	219,458.05	1.06	232,625.53
26	232,625.53	$4,000.00	236,625.53	1.06	250,823.06
27	250,823.06	$4,000.00	254,823.06	1.06	270,112.44
28	270,112.44	$4,000.00	274,112.44	1.06	290,559.19
29	290,559.19	$4,000.00	294,559.19	1.06	312,232.74
30	312,232.74	$4,000.00	316,232.74	1.06	335,206.70
31	335,206.70	$4,000.00	339,206.70	1.06	359,559.10
32	359,559.10	$4,000.00	363,559.10	1.06	385,372.65
33	385,372.65	$4,000.00	389,372.65	1.06	412.735.01
34	412.735.01	$4,000.00	416.735.01	1.06	441,739.11
35	441,739.11	$4,000.00	445,739.11	1.06	472,483.46
36	472,483.46	$4,000.00	476,483.46	1.06	505,072.47
37	505,072.47	$4,000.00	509,072.47	1.06	539,616.82
38	539,616.82	$4,000.00	543,616.82	1.06	576,233.83
39	576,233.83	$4,000.00	580,233.83	1.06	615,047.86
40	615,047.86	$4,000.00	619,047.86	1.06	656,190.73

ACTIVITY 22
ANSWERS FOR GROUP 6
$4,000 AT 10% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$4,000.00	$4,000.00	1.10	4,400.00
2	4,400.00	$4,000.00	8,400.00	1.10	9,240.00
3	9,240.00	$4,000.00	13,240.00	1.10	14,564.00
4	14,564.00	$4,000.00	18,584.00	1.10	20,420.40
5	20,420.40	$4,000.00	24,420.40	1.10	26,862.44
6	26,862.44	$4,000.00	30,862.44	1.10	33,948.68
7	33,948.68	$4,000.00	37,948.68	1.10	41,743.55
8	41,743.55	$4,000.00	45,743.55	1.10	50,317.91
9	50,317.91	$4,000.00	54,317.91	1.10	59,749.70
10	59,749.70	$4,000.00	63,749.70	1.10	70,124.67
11	70,124.67	$4,000.00	74,124.67	1.10	81,537.14
12	81,537.14	$4,000.00	85,537.14	1.10	94,090.85
13	94,090.85	$4,000.00	98,090.85	1.10	107,899.94
14	107,899.94	$4,000.00	111,899.94	1.10	123,089.93
15	123,089.93	$4,000.00	127,089.93	1.10	139,798.92
16	139,798.92	$4,000.00	143,798.92	1.10	158,178.81
17	158,178.81	$4,000.00	162,178.81	1.10	178,396.69
18	178,396.69	$4,000.00	182,396.69	1.10	200,636.36
19	200,636.36	$4,000.00	204,636.36	1.10	225,100.00
20	225,100.00	$4,000.00	229,100.00	1.10	252,010.00
21	252,010.00	$4,000.00	256,010.00	1.10	281,611.00
22	281,611.00	$4,000.00	285,611.00	1.10	314,172.10
23	314,172.10	$4,000.00	318,172.10	1.10	349,989.31
24	349,989.31	$4,000.00	353,989.31	1.10	389,388.24
25	389,388.24	$4,000.00	393,388.24	1.10	432,727.06
26	432,727.06	$4,000.00	436,727.06	1.10	480,399.77
27	480,399.77	$4,000.00	484,399.77	1.10	532,839.75
28	532,839.75	$4,000.00	536,839.75	1.10	590,523.73
29	590,523.73	$4,000.00	594,523.73	1.10	653,976.10
30	653,976.10	$4,000.00	657,976.10	1.10	723,773.71
31	723,773.71	$4,000.00	727,773.71	1.10	800,551.08
32	800,551.08	$4,000.00	804,551.08	1.10	885,006.19
33	885,006.19	$4,000.00	889,006.19	1.10	977,906.81
34	977,906.81	$4,000.00	981,906.81	1.10	1,080,097.49
35	1,080,097.49	$4,000.00	1,084,097.49	1.10	1,192,507.24
36	1,192,507.24	$4,000.00	1,196,507.24	1.10	1,316,157.96
37	1,316,157.96	$4,000.00	1,320,157.96	1.10	1,452,173.76
38	1,452,173.76	$4,000.00	1,456,173.76	1.10	1,601,791.14
39	1,601,791.14	$4,000.00	1,605,791.14	1.10	1,766,370.25
40	1,766,370.25	$4,000.00	1,770,370.25	1.10	1,947,407.28

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ACTIVITY 22

ANSWERS FOR GROUP 7

$5,000 AT 6% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$5,000.00	$5,000.00	1.06	$5,300.00
2	5,300.00	$5,000.00	10,300.00	1.06	10,918.00
3	10,918.00	$5,000.00	15,918.00	1.06	16,873.08
4	16,873.08	$5,000.00	21,873.08	1.06	23,185.46
5	23,185.46	$5,000.00	28,185.46	1.06	29,876.59
6	29,876.59	$5,000.00	34,876.59	1.06	36,969.19
7	36,969.19	$5,000.00	41,969.19	1.06	44,487.34
8	44,487.34	$5,000.00	49,487.34	1.06	52,456.58
9	52,456.58	$5,000.00	57,456.58	1.06	60,903.97
10	60,903.97	$5,000.00	65,903.97	1.06	69,858.21
11	69,858.21	$5,000.00	74,858.21	1.06	79,349.70
12	79,349.70	$5,000.00	84,349.70	1.06	89,410.68
13	89,410.68	$5,000.00	94,410.68	1.06	100,075.32
14	100,075.32	$5,000.00	105,075.32	1.06	111,379.84
15	111,379.84	$5,000.00	116,379.84	1.06	123,362.63
16	123,362.63	$5,000.00	128,362.63	1.06	136,064.39
17	136,064.39	$5,000.00	141,064.39	1.06	149,528.25
18	149,528.25	$5,000.00	154,528.25	1.06	163,799.95
19	163,799.95	$5,000.00	168,799.95	1.06	178,927.95
20	178,927.95	$5,000.00	183,927.95	1.06	194,963.63
21	194,963.63	$5,000.00	199,963.63	1.06	211,961.45
22	211,961.45	$5,000.00	216,961.45	1.06	229,979,14
23	229,979,14	$5,000.00	234,979,14	1.06	249,077.89
24	249,077.89	$5,000.00	254,077.89	1.06	269,322.56
25	269,322.56	$5,000.00	274,322.56	1.06	290,781.91
26	290,781.91	$5,000.00	295,781.91	1.06	313,528.82
27	313,528.82	$5,000.00	318,528.82	1.06	337,640.55
28	337,640.55	$5,000.00	342,640.55	1.06	363,198.98
29	363,198.98	$5,000.00	368,198.98	1.06	390,290.92
30	390,290.92	$5,000.00	395,290.92	1.06	419,008.39
31	419,008.39	$5,000.00	424,008.39	1.06	449,448.89
32	449,448.89	$5,000.00	454,448.89	1.06	481,715,82
33	481,715,82	$5,000.00	486,715,82	1.06	515,918.77
34	515,918.77	$5,000.00	520,918.77	1.06	552,173.90
35	552,173.90	$5,000.00	557,173.90	1.06	590,604.33
36	590,604.33	$5,000.00	595,604.33	1.06	631,340.59
37	631,340.59	$5,000.00	636,340.59	1.06	674,521.03
38	674,521.03	$5,000.00	679,521.03	1.06	720,292.29
39	720,292.29	$5,000.00	725,292.29	1.06	768,809.83
40	768,809.83	$5,000.00	773,809.83	1.06	820,238.42

ACTIVITY 22

ANSWERS FOR GROUP 8

$5,000 AT 10% INTEREST

1 Year	2 Beg. Balance (#6 from previous yr.)	3 Deposit	4 New Balance (#2 + #3)	5 1 + the Rate of Return	6 Ending Account Balance (#4 x #5)
1	$0.00	$5,000.00	$5,000.00	1.10	$5,500.00
2	5,500.00	$5,000.00	10,500.00	1.10	11,550.00
3	11,550.00	$5,000.00	16,550.00	1.10	18,205.00
4	18,205.00	$5,000.00	23,205.00	1.10	25,525.50
5	25,525.50	$5,000.00	30,525.50	1.10	33,578.05
6	33,578.05	$5,000.00	38,578.05	1.10	42,435.86
7	42,435.86	$5,000.00	47,435.86	1.10	52,179.45
8	52,179.45	$5,000.00	57,179.45	1.10	62,897.40
9	62,897.40	$5,000.00	67,897.40	1.10	74,687.14
10	74,687.14	$5,000.00	79,687.14	1.10	87,655.84
11	87,655.84	$5,000.00	92,655.84	1.10	101,921.42
12	101,921.42	$5,000.00	106,921.42	1.10	117,613.56
13	117,613.56	$5,000.00	122,613.56	1.10	134,874.91
14	134,874.91	$5,000.00	139,874.91	1.10	153,862.40
15	153,862.40	$5,000.00	158,862.40	1.10	174,748.64
16	174,748.64	$5,000.00	179,748.64	1.10	197,723.50
17	197,723.50	$5,000.00	202,723.50	1.10	222,995.85
18	222,995.85	$5,000.00	227,995.85	1.10	250,795.44
19	250,795.44	$5,000.00	255,795.44	1.10	281,374.98
20	281,374.98	$5,000.00	286,374.98	1.10	315,012.50
21	315,012.50	$5,000.00	320,012.50	1.10	352,013.75
22	352,013.75	$5,000.00	357,013.75	1.10	392,715.13
23	392,715.13	$5,000.00	397,715.13	1.10	437,486.64
24	437,486.64	$5,000.00	442,486.64	1.10	486,735.30
25	486,735.30	$5,000.00	491,735.30	1.10	540,908.83
26	540,908.83	$5,000.00	545,908.83	1.10	600,499.71
27	600,499.71	$5,000.00	605,499.71	1.10	666,049.68
28	666,049.68	$5,000.00	671,049.68	1.10	738,154.65
29	738,154.65	$5,000.00	743,154.65	1.10	817,470.12
30	817,470.12	$5,000.00	822,470.12	1.10	904,717.13
31	904,717.13	$5,000.00	909,717.13	1.10	1,000,688.84
32	1,000,688.84	$5,000.00	1,005,688.84	1.10	1,106,257.72
33	1,106,257.72	$5,000.00	1,111,257.72	1.10	1,222,383.49
34	1,222,383.49	$5,000.00	1,227,383.49	1.10	1,350,121.84
35	1,350,121.84	$5,000.00	1,355,121.84	1.10	1,490,634.02
36	1,490,634.02	$5,000.00	1,495,634.02	1.10	1,645,197.42
37	1,645,197.42	$5,000.00	1,650,197.42	1.10	1,815,217.16
38	1,815,217.16	$5,000.00	1,820,217.16	1.10	2,002,238.88
39	2,002,238.88	$5,000.00	2,007,238.88	1.10	2,207,962.77
40	2,207,962.77	$5,000.00	2,212,962.77	1.10	2,439,259.06

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ACTIVITY 23
SUMMARY TABLE

Annual Amount Deposited	Rate of return	Was $1 million accumulated? How long did it take?	Total Accumulation After 40 years
	6 percent		
	10 percent		
	6 percent		
	10 percent		
	6 percent		
	10 percent		
	6 percent		
	10 percent		

ACTIVITY 24
EVALUATION EXERCISE

In each of the situations below, the personal financial planner faces two choices.

Option A Save $200 per month for 39 years at an 8% rate of return to accumulate $640,303.

Option B Save $200 per month for 40 years at an 8% rate of return to accumulate $698,203.

1. What is different about the two options?

2. What is the marginal benefit of choosing Option B?

Option A Save $100 per month for 30 years at an 8% rate of return to accumulate $149,036.

Option B Save $150 per month for 30 years at an 8% rate of return to accumulate $223,554.

3. What is different about the two options?

4. What is the marginal benefit of choosing Option B?

Option A Save $2,000 per year for 20 years at a 9% rate of return to accumulate $102,320.

Option B Save $2,000 per year for 20 years at a 10% rate of return to accumulate $114,550.

5. What is different about the two options?

6. What is the marginal benefit of choosing Option B?

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ACTIVITY 24
EVALUATION EXERCISE (ANSWERS)

In each of the situations below, the personal financial planner faces two choices.

Option A Save $200 per month for 39 years at an 8% rate of return to accumulate $640,303.

Option B Save $200 per month for 40 years at an 8% rate of return to accumulate $698,203.

1. What is different about the two options?

   The options are identical except for the time period over which deposits are made.

2. What is the marginal benefit of choosing Option B?

   The marginal benefit of making deposits for one more year is $57,900.

Option A Save $100 per month for 30 years at an 8% rate of return to accumulate $149,036.

Option B Save $150 per month for 30 years at an 8% rate of return to accumulate $223,554.

3. What is different about the two options?

   The options are identical except for the dollar amount deposited each month.

4. What is the marginal benefit of choosing Option B?

   The marginal benefit of depositing an extra $50 per month over 30 years is $74,518.

Option A Save $2,000 per year for 20 years at a 9% rate of return to accumulate $102,320.

Option B Save $2,000 per year for 20 years at a 10% rate of return to accumulate $114,550.

5. What is different about the two options?

   The options are identical except for the rate of return.

6. What is the marginal benefit of choosing Option B? What would you do?

   The marginal benefit of earning 10 rather than 9 percent rate of return over 20 years is $12,230.

PURCHASING POWER (CASH VS. CREDIT)

INTRODUCTION

Purpose: In this lesson, students use economic concepts (costs, benefits, and opportunity cost) to make decisions on whether to use cash or credit to make routine purchases.

Background: The use of credit for consumer purchases is becoming increasingly commonplace. While traditionally confined to "big ticket" items, credit is now available for virtually any type of everyday purchase. All purchase decisions include an opportunity cost — the highest valued alternative purchase that could have been made. By using credit, consumers seemingly avoid the opportunity cost as it appears that they can simultaneously buy the most highly valued product as well as the next best alternative. In reality, the opportunity cost is experienced in the future when the purchase made on credit must be repaid and some future purchase cannot be made. Explicit use of opportunity cost allows the decision maker to think carefully about the alternatives. It may or may not be better to buy now on credit and give up future consumption. However, when using credit, the next best alternative may not be fully understood until it is time to repay the debt.

CONCEPTS

Benefits
Credit
Costs
Interest
Interest Rate
Money
Opportunity Cost

OBJECTIVES

♦ Use opportunity cost to make decisions about using credit or cash.

♦ Use benefits and costs to analyze credit decisions.

LESSON DESCRIPTION

Students will receive an allowance over the course of four, twenty-minute purchasing periods (twenty minutes = one week). Some students will receive their "allowance" at the start of the purchasing periods. Other students will be given their money at the end of the purchasing periods. The students' task will be to purchase products using cash or credit as appropriate. Certain purchases will be mandatory during each purchasing period, and others will be discretionary. Students will be allowed to purchase items up to but not exceeding their credit limit (set at twice their weekly income). They must pay their entire balance plus interest at the end of the exercise. During the simulation, students will have a chance to replace consumables, accrue interest on credit, and pay off credit purchases. After participating in this activity, students will examine the benefits and the costs of credit use.

TIME REQUIRED

♦ Two 50-minute and two 25-minute class periods as follows:

♦ Period one (50 minutes) will cover procedure steps 1-34.

♦ Periods two and three (25 minutes each) will cover procedure steps 35-46.

♦ Period four will cover procedure steps 47-59 and closure and evaluation.

MATERIALS

Four copies of Activity 25 for each student

One copy of Activity 26 for each student

Copies of Activities 27-29 cut into rectangles and used to "stock" the snack shop, school supply store, and entertainment center. (Approximately one copy of the sheets will be needed for each student in the class plus an intact sheet for price lists.)

Four copies of Activity 30 for each student or $60 in play money for each
Scissors
Calculators (optional)
Four boxes (one for each shop and one for the bank)
Transparency of Activities 25-30 (optional)
Four tables designated as follows: snack shop, school supply store, entertainment center, and bank
Copies of Activity 31 so that each student has an Easy Buy Credit Card
One copy of Activity 32 for each student

PROCEDURE

1. Ask the students to explain how they or their parents pay for the goods and services they purchase. (Answers will include: money, checks, credit cards.)

2. Define money as a medium of exchange. Explain that a medium of exchange simplifies trading. For example, people accept money in exchange for their work. Then, they use the money to purchase other goods and services.

3. Define credit as an agreement between a borrower and a lender in which the lender gives the borrower access to money in exchange for the borrower's promise to repay at a later time.

4. Explain that sometimes the money may be given to the borrower in the form of cash or a check. More often, however, the lender doesn't give the borrower cash. Instead, the borrower receives a form of identification with which he or she can make purchases without coin or currency.

5. Explain that when banks issue credit cards they provide this type of identification which gives the borrower permission to make credit purchases.

6. Discuss the steps in a credit-card loan:

   A. The borrower uses the credit card to make a purchase from a store.

   B. When the borrower signs the credit-card slip, he or she has initiated the loan with the bank.

   C. The store informs the bank of the borrower's purchase.

   D. The bank pays the store for the borrower's purchase and then sends a bill (usually each month) to the borrower for repayment of the loan.

   E. If the borrower does not repay the entire amount of the loan, he or she is charged interest by the bank.

7. Define interest as the price the borrower pays to use the lender's money. Interest is the payment the lender receives for the use of his or her money.

8. Explain that in this lesson students will be purchasing products with the play money provided.

9. Explain they may not be able to afford all the items they want with the money available. As a result, they will have to give up some things they want in order to purchase other things they want more. The items forgone will be the opportunity costs of their choices.

10. Distribute an Easy Buy Credit Card to each student. Instruct students to enter their names on the designated line.

11. Explain they will be able to use these cards to make credit purchases during the lesson.

12. Set up four areas in the classroom. Place a table in each area with signs signifying a snack shop, school supply store, entertainment center, and bank. Distribute appropriate materials to each. Assign one student to staff each of the four areas.

13. Explain you will assist with the bank.

14. Divide the rest of the class into two groups: a and b.

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15. Instruct students to pair off. Each pair should include a person from the "a" group and a person from the "b" group. (If there is an odd number of students, assign the remaining student to one of the pairs.)

16. Explain that there will be four, twenty-minute time periods (or "weeks") during which students will make purchases. They will be given $15 in play money with which to make their purchases each week. They may also use credit to make purchases as long as they never owe more than $30 at one time.

17. Explain they may purchase items they want, but they must purchase the following:

two pencils per week
fifty sheets of paper per week
one eraser per week
one pen per week
at least one snack per day during a five school-day week (either a drink, food item, or both)
at least one entertainment item per week

18. Explain that additional mandatory purchases may be announced from time to time.

19. Explain that "a" students will receive their money at the beginning of the week, and "b" students will receive their money at the end of the week. Thus, "b" students will have to use credit for their purchases during the first week while "a" students may decide whether or not to use credit during the first week. All debts must be repaid at the end of the four weeks.

20. Explain that the interest rate for any credit purchases will be 20% (0.20) each week. The interest payment will be calculated on the balance they owe before any payment is made at the end of every week.

21. Explain that each week they must pay at least 30 percent of their total debt which will cover the interest charge as well as a portion of the amount borrowed. Point out that credit-card holders must also make a minimum payment in each billing period.

22. Distribute copies of Activities 25 and 26 to each student.

23. Explain that they will record their purchases each week on Activity 25.

24. Remind them that some purchases are mandatory each week and those are listed at the bottom of the Purchase Log. Also remind them that additional mandatory purchases may be announced at any time.

25. Explain that if they make purchases with cash, they should place the money in the boxes at the appropriate table and then enter the cash purchase on the Purchase Log. If they are making the purchases with credit they should *circle* the entry made on the log.

26. Explain that Activity 26 will be used to summarize their purchases.

27. Distribute $15 to each "a" student for week one.

28. Instruct the students to begin making their purchases and recording them on their Purchase Logs.

29. After approximately 10 minutes, announce that all students must purchase two folders and a bottle of glue for an upcoming school project.

30. When a total of 20 minutes has passed, announce the end of the week. Distribute money to "b" students.

31. Instruct students to total their circled credit purchases for the week and record the amount (even if the amount is zero) in column #2 of the Credit Use Tally sheet on Activity 26. Next, instruct them to complete week 1, columns 3, 4, 5, and 6. Remind them that they must record at least 30 percent of the total debt (from column #4) in column

#5. They must also record the correct amount in column #6 and in column #1 for the next week.

32. Instruct students with debts to make at least the minimum payment at the bank.

33. Instruct the bankers to initial the Credit Use Tally Sheet to verify that the required payment has been made.

34. Instruct all students to complete row one (week one) of the Expenditure Log Weekly Summary on Activity 26.

35. Begin week two by distributing another copy of Activity 25 to each student. Instruct them to circle week 2 at the top.

36. Distribute $15 to all "a" students.

37. Instruct students to begin making purchases and recording them on the Purchase Log for week two.

38. Remind students that the money for cash purchases should be placed in the boxes at the appropriate table and the amount should be recorded on the log. Credit purchases should be recorded and circled.

39. After 10 minutes, announce that all students must purchase a stapler and staples for an upcoming school project.

40. Repeat procedure steps 30 through 34 above.

41. Begin week three by distributing another copy of the Purchase Log to each student. Instruct them to circle week 3 at the top.

42. Distribute $15 to all "a" students.

43. Instruct students to begin making purchases and recording them on the Purchase Log for week three.

44. Remind students to follow the same procedure as preceding weeks.

45. After 5 minutes, announce that all students must purchase a roll of tape for an upcoming school project.

46. Repeat procedure steps 30 through 34.

47. Begin week four by distributing another copy of the Purchase Log to each student. Instruct them to circle week 4 at the top.

48. Distribute $15 to all "a" students.

49. Instruct students to begin making purchases and recording them on the Purchase Log for week four.

50. Remind students that cash purchases should be entered in the appropriate boxes. Credit purchases should be circled.

51. After 5 minutes, announce that all students must purchase a ring binder for an upcoming school project.

52. Repeat procedure steps 30 through 34 above.

53. At the end of the fourth week, instruct the students to complete the Purchase Log Overall Summary on Activity 26. Ask students to share their record of items purchased. Cash and credit purchase records will be shown, analyzed, and compared. Discussion points should include:

A. How many of you used credit to make purchases? (Answers will vary.)

B. Why did you use credit? (didn't have cash but wanted or was required to have an item)

54. Select individual students, and discuss the following.

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A. What did you purchase on credit? (Answers will vary.)

B. When did you pay for these purchases? (in a future week)

C. When you used your cash in future weeks to pay for past purchases, what did you give up? (purchases that could have been made in those future weeks)

55. After several examples have been shared, summarize by explaining that the opportunity cost of any decision is the next best alternative. By using credit in the earlier weeks, students had to give up alternatives in later weeks. The best of these alternatives was the opportunity cost of using credit.

56. Discuss the following:

A. Would you have made different credit decisions if you had focused on the opportunity cost of using credit? (Answers will vary.)

B. How much interest did you pay over the four-week period? (Answers will vary.)

C. In the short run, the use of credit provided increased purchasing power. What happened in the long run? (Purchasing power was reduced because part of your cash had to be used to pay accrued interest.)

57. Instruct "a" students and "b" students to compare their use of credit during the lesson. Have them identify and discuss the reasons why any differences occurred.

58. Lead a discussion of the benefits of the wise use of credit and the costs of unplanned use of credit by asking the following questions.

A. Why is it important to weigh the benefits and costs of credit in making careful decisions about present and future spending? (Answers will vary.)

B. In the activity, what were examples of unplanned purchases? (folders, glue, stapler and staples, tape, a ring binder)

C. What was the impact of these unplanned emergencies on your personal finances? (had to give up other purchases, had to borrow)

D. Did some of you exceed your credit limit? (Answers will vary.)

E. Were any of you unable to repay your debts? (Answers will vary.)

59. Explain that it is better to have such experiences in a classroom, but that such things happen to people in real life when they fail to adequately manage credit use and plan for financial emergencies.

CLOSURE

Summarize the lesson by explaining that credit does not increase purchasing power in the long run, but actually reduces purchasing power because of the interest that must be repaid. However, credit does have benefits, as many of the students saw during the exercise. Similarly, unplanned use of credit has costs. Reiterate that credit use requires paying for past purchases with future income. When we buy goods and services on credit we give up future goods and services. By focusing on opportunity cost, people can better plan their use of credit and ensure that using credit is indeed the best alternative.

EVALUATION

Distribute a copy of Activity 32 to each student or display a transparency. Have the students discuss or write responses to the questions posed. Make sure that students see the key point of the evaluation, as well as, the entire lesson. The opportunity cost of using credit is the next best alternative forgone when the debt is repaid. In the evaluation exercise,

it is Michelle's inability to buy the birthday gift for her mother. Wise and well-planned decisions about the use of credit today focus on the opportunity cost at the time the debt must be repaid.

SUGGESTION FOR FURTHER ENHANCEMENT

Have students go to the school or public library and find magazine articles about the problems people can experience when using credit. Magazines such as *Kiplinger's Personal Finance Magazine* and *Money* are good resources. Instruct students to write summaries of their articles and present what they learned to the rest of the class. The presentations should focus on using opportunity cost to avoid credit problems.

PARENTAL INVOLVEMENT

♦ Have a parent come to class and serve as the banker for the lesson. Ask the parent to discuss the benefits and costs on which he or she focuses when deciding whether to use credit for different purchases.

♦ Have students write a short letter to their parents about applying economic concepts to credit decisions. Ask the students to discuss the benefits and costs of credit use with their parents.

RESOURCES

Financial Responsibility (education kit). For price and ordering information contact: Office of Public Responsibility, American Express Company, 200 Vesey Street, New York, NY 10285-4850.

Credit Education: Strategies for Success, Vol.1, 1994, 20 pp., free, National Coalition for Consumer Education, 434 Main St., #201, Chatham, NJ 07928 (201-635-1916). This publication highlights projects from 1991-1992 of the NCCE/AT&T Consumer Credit Education Fund. This publication includes strategies for developing and implementing consumer education programs, along with descriptions of successful approaches for consumer credit education.

Out of Hock: Credit Card & Personal Debt, 1994, 48 pp., quantity discounts available. For price and ordering information contact: Dahlstrom & Co., 155 Wilson Rd., Hollistron, MA 01746-1433 (800-222-0009). This booklet provides a personal and societal perspective of consumer credit. The topics covered include: dangers of credit, bill collectors, controlling debt, and sources of credit assistance. An instructor's manual is available.

Credit Wise: Coming to Terms, 1994, VHS, 15 minutes, one free copy. For price and ordering information contact: Office of Public Responsibility, American Express Co., 200 Vesey St., New York, NY 10285-4850. This lively presentation offers clear explanations for most credit card concepts, including rates, credit costs, grace period, and cash advances. Appropriate for all ages. The supplementary teaching guide provides an overview and suggested teaching methods.

Credit: Young Persons (resource list), 1994. For price and ordering information contact: National Institute for Consumer Education, 207 Rackham Building, Eastern Michigan University, Ypsilanti, MI 48197 (800-336-NICE or 313-487-2292).

How to Use Consumer Credit Wisely (teaching guide), 1991. For price and ordering information contact: International Credit Association, Publisher, 243 North Lindbergh Blvd., St. Louis, MO 63141-1757 (314-991-3030).

Letter from Lincoln (article), 1 p., free. For ordering information contact: Foundation for Economic Education, Inc., Irvington-on-Hudson, NY 10533. This is a copy of a letter written by Abraham Lincoln to his stepbrother regarding money, credit, and the benefits of labor. It presents Lincoln's point of view regarding public policy issues.

Credit for Kids, 1993, 142 pp. For price and ordering information contact: Center for Economic Education, University of Cincinnati, M.L. 0223, Cincinnati, OH 45221-0223 (513-556-2948). This unit, for grades 7-9, contains 13 lessons to help students understand credit and make better credit decisions.

Credit Cards: Living with Plastic, 1991. For price and ordering information contact: Learning Seed Company, 330 Telser Road, Lake Zurich, IL 60047 (800-634-4941). This unit provides instruction for young adults on evaluating and using credit cards; includes legal rights as a cardholder.

ACTIVITY 25
PURCHASE LOG

Weekly Purchase Log Week 1 2 3 4 Name_____
(circle week #)

School Supply Purchases	Snack Purchases	Entertainment Purchases

Required Purchases:

- Two pencils per week*
- One eraser per week*
- Additional required school supply items may be announced from time to time
- At least one recreation purchase per week*
- Fifty sheets of paper per week*
- One pen per week*
- At least one snack (either a drink, food item, or both) PER DAY for a five school day week* (Thus, you will need at least five snack purchases per week.)

*There are 4, twenty-minute time periods in this exercise with each representing one week.

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ACTIVITY 26
SUMMARY TABLES

Credit Use Tally Sheet

Week	1 Beginning Balance (#6 previous)	2 Amount Borrowed	3 Interest Owed (#1+#2 x.2)	4 Total Debt (#1+#2+#3)	5 Amount Repaid-at least .30 x #4	6 Ending Balance (#4 - #5)
1	$0					
2						
3						
4						

Expenditure Log Weekly Summary

Week	School Supply Purchases	Snack Purchases	Entertainment Purchases	Credit Card Payments (Credit Students Only; see Column #5 above)
1				
2				
3				
4				

Purchase Log Overall Summary Weeks 1-4

Total School Supply Purchases	Total Snack Purchase	Total Entertainment Purchases	Total Credit Card Payments (Credit Students Only)

ACTIVITY 27
SNACK SHOP ITEMS

Fruit Roll-Ups **Contents: 4 roll-ups** **$1.00**	**Candy Bars** **Contents: 2 bars** **$1.00**
Soft Drinks **Contents: 1 can** **$ .50**	**Chocolate Cookies** **Contents: half dozen** **$1.00**
Fruit Juice **Contents: 2 boxes** **$ .50**	**Tortilla Chips** **Contents: 1 bag** **$ .50**
Fruit **Contents: 2 pieces** **$1.00**	**Raisins** **Contents: 1 package** **$ 1.00**

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ACTIVITY 28
SCHOOL SUPPLY STORE ITEMS

Pencils Contents: 2 $ .50	Paper Contents: 50 sheets $ .50	Erasers Contents: 1 $ .50
Pens Contents: 1 $1.00	Colored Markers Contents: 8 $3.00	Report Folders Contents: 2 $1.00
Squiggle Pen Contents: 1 $4.00	Ring Binder Contents: 1 $3.50	Stapler Contents: 1 $2.00
Tape Contents: 1 roll $1.50	Glue Contents: 1 bottle $1.00	Staples Contents: 1 box $1.00

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ACTIVITY 29
ENTERTAINMENT CENTER ITEMS

Movie Ticket 1 admission $5.00	Video Game 1 $20.00
Book 1 paperback $4.00	Comic Books 1 year subscription $15.00
School Dance admission for two $4.00	School Football Game 1 admission $1.50
Audio Compact Disc Contents: 1 CD $15.00	Movie 1 video rental $2.50

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ACTIVITY 30
PLAY MONEY

This is a student paycheck for one week. Pass out to students intact and allow them to cut apart or cut apart in advance and clip together.	$1 Dollar $
$1 Dollar $1	$1 Dollar $1
$1 Dollar $1	$1 Dollar $1
$1 Dollar $1	$1 Dollar $1
$1 Dollar $1	$1 Dollar $1
$1 Dollar $1	$1 Dollar $1
$1 Dollar $1	$1 Dollar $1

10 Cents 10	10 Cents 10	10 Cents 10	10 Cents 10
10 Cents 10	10 Cents 10	10 Cents 10	10 Cents 10
10 Cents 10	10 Cents 10	10 Cents 10	10 Cents 10
10 Cents 10	10 Cents 10	10 Cents 10	10 Cents 10
10 Cents 10	10 Cents 10	10 Cents 10	10 Cents 10

BEST COPY AVAILABLE

ACTIVITY 31
EASY BUY CREDIT CARDS

The Easy Buy Credit Card Name_____ Credit Limit __$30__	The Easy Buy Credit Card Name_____ Credit Limit __$30__
The Easy Buy Credit Card Name_____ Credit Limit __$30__	The Easy Buy Credit Card Name_____ Credit Limit __$30__
The Easy Buy Credit Card Name_____ Credit Limit __$30__	The Easy Buy Credit Card Name_____ Credit Limit __$30__
The Easy Buy Credit Card Name_____ Credit Limit __$30__	The Easy Buy Credit Card Name_____ Credit Limit __$30__

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ACTIVITY 32
EVALUATION EXERCISE

Michelle Carson is a typical eighth grader. She has several friends with whom she spends a lot of time and shares many of the typical experiences of kids her age. Michelle had been interested in buying a pair of jeans to go with a special shirt she had received as a gift. Michelle had saved $35 for the jeans. Two months ago, when she went to buy the pants with several of her friends, Michelle saw a skirt that would also go with the shirt. Michelle knew that if she bought the jeans, she would not be able to buy the skirt. The skirt costs $25. Michelle's friend, Lucinda, agreed to lend Michelle the $25 to buy both if Michelle would pay her $30 in two months. It is now time to pay Lucinda for the loan. Michelle has the $30, but really wants to use it to buy a gift for her mother's birthday.

1. Had she not borrowed the money from Lucinda, what would have been Michelle's opportunity cost of using the $35 she had saved to buy the jeans?

2. What was the price of borrowing the money from Lucinda?

3. What were the benefits of borrowing the money from Lucinda?

4. What was the opportunity cost of borrowing the money from Lucinda to buy the skirt?

5. If you were Michelle, how would the opportunity cost you identified in #4 have affected your decision to use credit to buy the skirt?

ACTIVITY 32
EVALUATION EXERCISE (ANSWERS)

Michelle Carson is a typical eighth grader. She has several friends with whom she spends a lot of time and shares many of the typical experiences of kids her age. Michelle had been interested in buying a pair of jeans to go with a special shirt she had received as a gift. Michelle had saved $35 for the jeans. Two months ago, when she went to buy the pants with several of her friends, Michelle saw a skirt that would also go with the shirt. Michelle knew that if she bought the jeans, she would not be able to buy the skirt. The skirt costs $25. Michelle's friend, Lucinda, agreed to lend Michelle the $25 to buy both if Michelle would pay her $30 in two months. It is now time to pay Lucinda for the loan. Michelle has the $30, but really wants to use it to buy a gift for her mother's birthday.

1. Had she not borrowed the money from Lucinda, what would have been Michelle's opportunity cost of using the $35 she had saved to buy the jeans?

   The next best alternative to buying the jeans was the skirt.

2. What was the price of borrowing the money from Lucinda?

   The cost of borrowing the money from Lucinda was the $5 interest she agreed to pay.

3. What were the benefits of borrowing the money from Lucinda?

   The benefits included having the skirt as well as the jeans.

4. What was the opportunity cost of borrowing the money from Lucinda to buy the skirt?

   The opportunity cost was the inability to buy a gift for her mother's birthday.

5. If you were Michelle, how would the opportunity cost you identified in #4 have affected your decision to use credit to buy the skirt?

   The answer will vary from student to student.

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LESSON SEVEN

SAVERS, BANKERS, AND BORROWERS: A LESSON IN INTERDEPENDENCE

INTRODUCTION

***Purpose*:** In this lesson, students use opportunity cost and interdependence to analyze the decisions made by savers, banks, and borrowers. Then, given an amount deposited by a group of savers, information on the expenses and profits of a financial institution, and loan amounts desired by borrowers, they calculate the required interest rate.

Background: Depository financial institutions (banks, credit unions, and savings and loan associations) perform two primary functions. First, they accept deposits from those who want both a safe haven for their funds and income for the use of their funds. Second, financial institutions lend funds to people who want to borrow. Although the rate of interest paid to savers and paid by borrowers is generally based on activity within the market for loanable funds, banks have some interest rate flexibility within a narrow range. Savers will select a bank with the highest interest rate relative to the interest rates offered at other institutions. Similarly, borrowers will seek the lowest interest rate, that rate being determined in part by the likelihood of the borrower to repay the loan. The interest rate paid by the borrowers must cover the expenses of granting and servicing the loans, must include a fair level of profit for the owners of the financial institution, and must cover the interest desired by the depositors who make it possible for the financial institution to lend. Understanding this interdependence among savers, financial institutions, and borrowers is important to personal financial decision making.

CONCEPTS

Interdependence
Interest
Opportunity Cost
Profit

OBJECTIVE

♦ Use opportunity cost and interdependence to make more effective and responsible personal finance decisions related to saving and borrowing.

LESSON DESCRIPTION

This lesson begins with an illustration of how savers' deposits are transformed into loans for borrowers. The discussion of this transformation is based on the concept of opportunity cost; banks must pay a level of interest sufficient to cover the opportunity cost of banks plus the opportunity cost of savers. Then students work in groups to determine the interest rate the borrowers must pay in order to cover the opportunity costs of the bank and the savers. This interplay of opportunity cost and interest rates results in an interdependence among savers, banks, and borrowers. The students will discuss this interdependence and its role in their decisions to save and borrow responsibly.

TIME REQUIRED

♦ One fifty-minute class period

MATERIALS

One transparency of Activity 33
One copy of Activities 33, 34, and 35 for each student
Answers for Activity 33
Answers for Activity 34

PROCEDURE

1. Distribute a copy of Activity 33 to each student and/or display on a transparency. Explain that the decisions of savers, bankers, and borrowers are affected by opportunity cost.

2. Define opportunity cost as the highest forgone alternative when a decision is made.

3. Use the illustration on Activity 33 as you explain the opportunity costs of savers and bankers:

A. Savers deposit money in the bank to earn interest. The interest received must exceed the next best alternative that they have for saving. For example, if savers could get 6 percent on their savings deposits elsewhere, Everybody's Community Bank must pay at least 6 percent to attract deposits.

B. Everybody's Community Bank is in business to make a profit for its owners by lending funds. Profit is the difference between revenues and costs. Profit becomes the payment to bank owners who have many alternative uses for their money. As long as the expected profit of bank ownership is greater than the expected profit of the alternative uses, they will remain bank owners. The greatest share of the bank's revenue comes from interest paid by borrowers. The bank's costs include employees' wages, rent for office space, and other operating costs. These are the costs of doing business and for example, might be two percent of the amount the bank lends. Another cost is the profit expected by the bank's owners. And yet another cost is the interest payments the bank must make to those who have deposits in their facility. Everybody's Community Bank pays six percent to its savings depositors.

C. Borrowers pay interest to compensate lenders for the use of borrowed money, to cover a portion of the bank's cost of doing business, and to partially compensate the bank owners. Therefore, interest is the price of the loan, and it is based on the opportunity cost of those who provide the money (the savers and bank owners) and the costs of operating the bank.

4. Explain that the general level of interest is determined in the marketplace. Just as the interaction of supply and demand assigns a market price for a good or service, the interaction of supply and demand also assigns a market price for funds--and that market price is referred to as the interest rate.

5. Explain that savers (the suppliers of funds), will be willing to save more funds at higher interest rates and less funds at lower interest rates. This reflects the opportunity cost of saving money and forms the supply curve. On the other hand, borrowers (the demanders of funds), borrow less funds at higher interest rates and more at lower interest rates, and form the demand curve. The point at which supply and demand intersect determines the market interest rate. So, in general, the rate of interest paid to savers and paid by borrowers is determined in the marketplace. However, if banks can reduce their costs or increase their revenue, they can be somewhat flexible with the interest rates they offer.

6. Divide the class into small groups and distribute Activities 34 and 35 to each group.

7. Explain that 100 savers are willing to deposit $1,000 each in Everybody's Community Bank, if they can be assured of earning an interest rate of 6% for one year. Likewise, 10 borrowers want to borrow $10,000 each from Everybody's Community Bank for one year.

8. Explain that borrowers want to pay as low an interest rate as possible. The bank is willing to make the loans if it can cover its costs and make a profit, assumed here to be 1 percent of revenues for its investors/owners.

9. Explain that each group should use Activity 34 to determine the interest rate that Everybody's Community Bank must charge the borrowers to earn the revenues needed.

10. After they have completed the activity, instruct students to discuss and answer the questions on Activity 35.

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11. After 15 or 20 minutes, have the groups report the interest rate they would need to charge. You may wish to pass out the answer sheet for Activity 35.

12. Ask students to explain the components of the 9 percent interest rate to be paid by the borrowers. (They should be able to see that 6 percent goes to savers, 2 percent goes to cover operating costs, and 1 percent provides the profit to investors/owners of the bank.)

13. Explain that the interest rate to be paid to savers and the rate of profit desired by bank investors is based on the opportunity costs of savers and investors.

14. As a class discuss the questions from Activity 35 that the students considered in their groups. In the discussion, be sure the following points are brought out:

A. Savers deposit savings in financial institutions that yield them a level of interest income exceeding the next best alternative available to them for their saving.

B. Banks earn income by facilitating exchange among those who wish to save and those who wish to borrow, and banks profit by making wise loans with their deposits.

C. Borrowers pay interest as a means of paying for the use of the borrowed funds.

15. Explain that savers, banks, and borrowers are interdependent, which means that they are each affected by the decisions or events that affect the others. Banks are dependent on savers to provide the funds on the basis of which loans can be made to borrowers. Banks are similarly dependent upon borrowers to repay the loans so that funds are available to savers when they make withdrawals. Borrowers would have no funds to borrow if not for savers, and savers would not be able to earn interest on their deposits if not for payments by borrowers for the use of the funds.

16. Explain that due to interdependence, people acting in their own best interest benefit from the actions of others, who are themselves, seeking their own best interests. Lead a discussion to answer the following questions:

A. In what ways do savers benefit from the decisions of borrowers?

B. In what ways do borrowers benefit from the decisions of savers?

C. How might savers be harmed by borrowers?

D. How might borrowers be negatively affected by decisions made by savers?

CLOSURE

Summarize the lesson for students by explaining that the focus was on two important economic concepts (opportunity cost and interdependence) that affect their decisions to save and borrow. Ask what those two concepts were and for their definitions.

Ask the students to cite ways that opportunity cost affects the decisions of savers, banks, and borrowers.

Ask the students to cite ways that interdependence affects the decisions of savers and borrowers.

EVALUATION

1. Tell students that a new bank has come to town and that to attract depositors it is offering 6.5% for savings accounts. Ask students to answer the following questions:

A. What is the opportunity cost for depositors who stay with Everybody's Community Bank? (It is the forgone opportunity of getting an additional 0.5% at the new bank.)

B. What would Everybody's Community Bank need to do to keep its depositors? (It would

have to raise the interest rate it pays to savers.)

C. What effect would the higher rates at the new bank have on the people who want to borrow at Everybody's Community Bank? (If Community Bank raised interest paid to savers by .5%, it would have to cover that additional cost by reducing costs or by increasing revenue by raising the interest rate for borrowers.)

D. What would borrowers do when Everybody's Community Bank raises its lending interest rate? (They would look for other places to borrow funds since the opportunity cost of borrowing from Everybody's Community Bank rather than another alternative has gone up.)

2. Have students write a brief essay in response to the following question: How would the failure of a borrower to repay his/her loan affect owners, savers, and borrowers of Everybody's Community Bank? (The failure of a borrower to repay a loan represents a loss of revenue for the bank. Profits will be lower, so owners will not receive their expected return. If the expected return is lower than the return on alternative uses of their money, owners may sell their shares of Everybody's Community Bank and choose an alternative financial investment. If revenues are sufficiently low, the bank may have to lower the interest rate it pays to savers. If savers find an alternative bank paying a higher interest rate, they may withdraw their savings from Everybody's Community Bank in favor of the alternative opportunity. Finally, Everybody's Community Bank may seek to increase its revenue by increasing the interest rate future borrowers must pay. Those borrowers may find a lower interest rate at an alternative institution; otherwise, they must pay the higher rate or forgo the good they intended to buy with borrowed money.)

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Ask students what might happen if Everybody's Community Bank were able to be more efficient and could cut its operating costs to 1.5% of the amounts loaned. (Several things could occur. The bank could increase the interest rate paid to savers, raise wages, increase the profit paid to owners, or lower the interest rate paid by borrowers.)

PARENTAL INVOLVEMENT

♦ Have students survey local financial institutions to determine interest rates for savings accounts. Then, have the students go home and talk to their parents about the student's current or anticipated savings behavior. This discussion should focus on the student's use of opportunity cost to explain where he or she would prefer to put his or her savings from the list of financial institutions surveyed.

RESOURCES

Financial Responsibility (education kit). For price and ordering information, contact: Office of Public Responsibility, American Express Company, 200 Vesey Street, New York, NY 10285-4850.

Credit Education: Strategies for Success, Vol.1, 1994, 20 pp., free, National Coalition for Consumer Education, 434 Main St., #201, Chatham, NJ 07928 (201-635-1916). This publication highlights projects from 1991-1992 of the NCCE/AT&T Consumer Credit Education Fund. This guide includes strategies for developing and implementing consumer education programs, along with descriptions of approaches for consumer credit education.

Credit Ready? Five Essential Lesson Before Starting to Use Credit, free, American Express Company, P.O. Box 4635, Trenton, NJ 08650-4635. This kit contains five self-contained learning capsules on credit with activities and brief videos.

Credit Wise: Coming to Terms, 1994, VHS, 15 minutes, one free copy. For price and ordering information, contact: Office of Public Responsibility, American Express Co., 200 Vesey St., New York, NY 10285-4850. This video offers clear explanations of most credit card concepts including: rates, credit costs, grace periods, and cash advances. Appropriate for all ages. Supplementary teaching guide provides an overview and suggested teaching methods.

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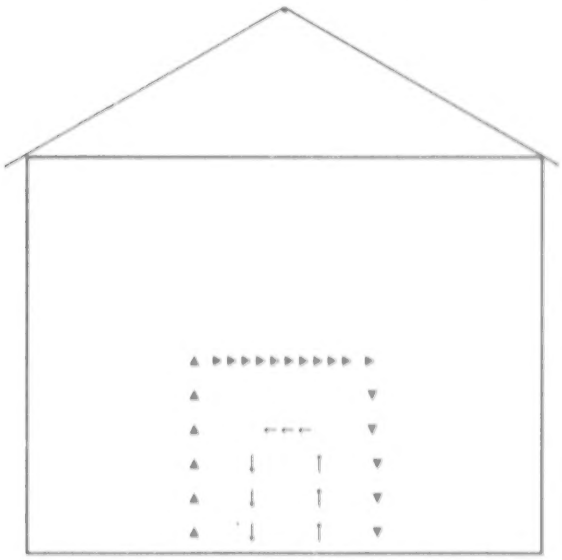
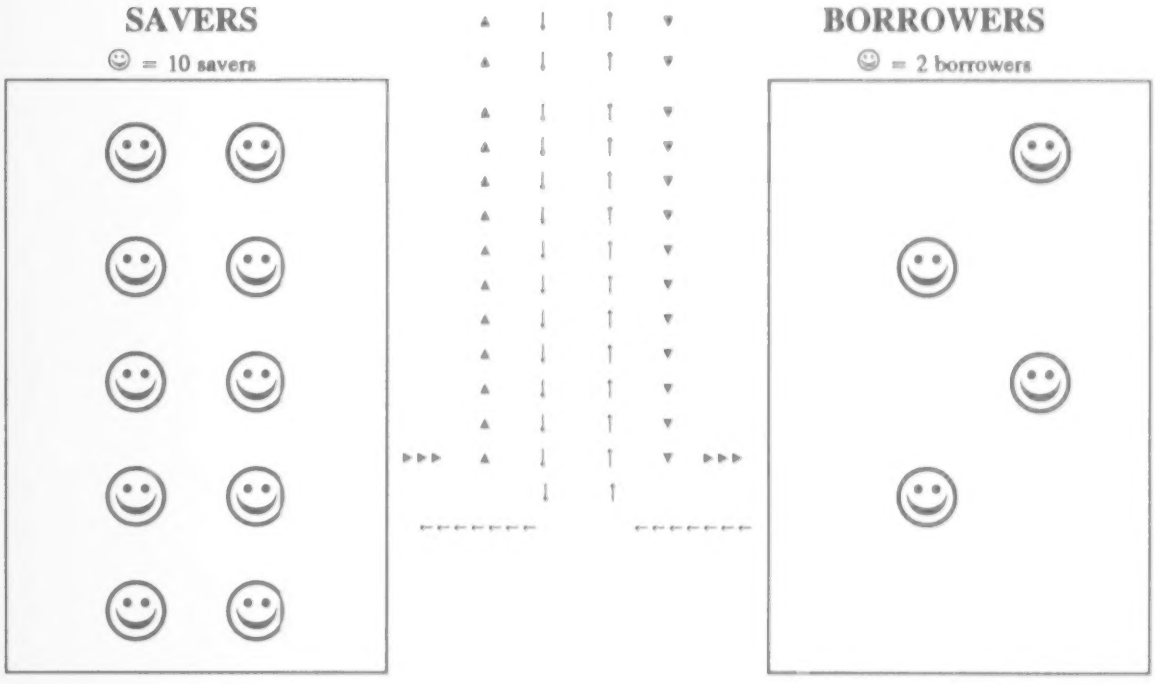
Credit for Kids, 1993, 142 pp. For price and ordering information, contact: Center for Economic Education, University of Cincinnati, M.L. 0223, Cincinnati, OH 45221-0223 (513-556-2948). This unit, for grades 7-9 contains thirteen lessons that help students understand credit and learn how to make decisions.

ACTIVITY 33
EVERYBODY'S COMMUNITY BANK



EVERYBODY'S COMMUNITY BANK



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ACTIVITY 34
INTEREST CALCULATIONS

Task: Determine the lowest possible interest rate that the bank can charge its 10 borrowers of $10,000 and still manage to:

A. pay all its $1,000 savers 6% interest per year and

B. pay the expenses and earn a profit for the bank.

Savers

Total amount deposited by savers: 100 x $1,000 = (#1)_____

Interest to be paid to savers: (#1) x 6% (.06) = (#2)_____

Bank

Operating costs: 2% (.02) x #1 (#3)_____

Profit: 1% (.01) x #1 (#4)_____

Borrowers

Total amount to be repaid by borrowers: 10 x $10,000 = (#5)_____

Interest paid by borrowers: #1 + #2 + #3 + #4 - #5 = (#6)_____

Interest rate as a percent: #6 divided by #5 = (#7)_____

ACTIVITY 34
INTEREST CALCULATIONS (Answers)

Task: Determine the lowest possible interest rate that the bank can charge its 10 borrowers of $10,000 and still manage to:

A. pay all its $1,000 savers 6% interest per year and

B. pay the expenses and earn a profit for the bank.

Savers

Total amount deposited by savers: 100 x $1,000 = (#1) $100,000

Interest to be paid to savers: (#1) x 6% (.06) = (#2) $ 6,000

Bank

Operating costs: 2% (.02) x #1 (#3) $ 2,000

Return on investment: 1% (.01) x #1 (#4) $ 1,000

Borrowers

Total amount to be repaid by borrowers: 10 x $10,000 = (#5) $100,000

Interest paid by borrowers: #1 + #2 + #3 + #4 - #5 = (#6) $ 9,000

Interest rate as a percent: #6 divided by #5 = (#7) 9%

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ACTIVITY 35
DISCUSSION QUESTIONS

1. Why would savers want to be a part of this process?

2. Why would borrowers want to be a part of this process?

3. Why would banks want to be part of this process?

4. Why are interest rates different for borrowers and savers?

5. Would you rather be a saver or a borrower? Why?

6. What might happen if borrowers failed to repay debts and interest?

7. What would happen to borrowers if savers were unwilling to save?

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ACTIVITY 35
DISCUSSION QUESTIONS (Answers)

1. Why would savers want to be a part of this process?

   (Students could give many reasons. The best answers would be those that recognized that savers have many options and would pick the one that had an interest rate at least as high as the next best alternative.)

2. Why would borrowers want to be a part of this process?

   (Students could give many reasons. The best answers would recognize that borrowers will want to pay as low an interest rate as possible. Paying a higher rate would have an opportunity costs because the interest to be paid would not be available for other alternative uses.)

3. Why would banks want to be part of this process?

   (Banks are able to earn profit for their investor/owners.)

4. Why are interest rates different for borrowers and savers?

   (The difference in rates reflects the need for the bank to pay its operating costs, a return to its owner/investors, and interest to savers.)

5. Would you rather be a saver or a borrower? Why?

   (There is no one correct answer. The answer depends on the opportunity cost faced by each person.)

6. What might happen if borrowers failed to repay debts and interest?

   (The biggest impact would be on the savers and the owner/investors. If the bank lost money, investor/owners would not earn their expected return and would suffer the opportunity cost of not having what could have been earned elsewhere. In the future, interest rates paid to savers and charged to borrowers may change to reflect the added risk.)

7. What would happen to borrowers if savers were unwilling to save?

   (If savers deposit less or withdraw their funds, less money would be available to lend. This means the supply of loanable funds would be reduced and interest rates would rise. This would be bad for borrowers. However, higher interest rates would attract more deposits because the opportunity cost of failing to save would be higher.)

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WHO GETS THE MONEY?

INTRODUCTION

Purpose: In this lesson, students use benefit/cost analysis to make decisions about credit-worthiness. The costs and benefits for both borrowers and lenders are discussed. Students also determine strategies they can employ to improve credit-worthiness. Through these activities, students learn the importance of their decisions to maintain good credit and its effect on their ability to use credit to meet their financial goals.

Background: Because granting credit is a form of trust between lender and borrower, only credit-worthy applicants are granted credit at comparatively low rates of interest. The decision to grant credit comes after a careful analysis of an applicant's credit history. Individuals with good credit histories face reduced borrowing costs as interest rates are lower. They also benefit from having multiple sources from which they may borrow. Conversely, individuals who have poor credit histories have higher borrowing costs reflected in higher interest rates and reduced benefits, including the possibility of being ineligible for loans. From the point of view of the lender, persons with good credit histories present lower costs and less risk, and therefore, increase the profit potential of the lender.

The information used when deciding among credit applicants is commonly classified according to the Cs of credit, which include capacity, character, capital, and collateral. Information related to the Cs of credit is obtained from several sources including a credit application and a credit report. Borrowers who have made wise financial decisions related to the Cs of credit present fewer costs for lenders and are thus more likely to obtain loans.

Risk is related to uncertainty. In this case it is the uncertainty of repayment. People with poor credit histories represent more risk to lenders because, if they fail to repay, the lender's profits are reduced. To accept the additional risk, lenders charge higher interest rates to people with poor credit histories if loans seem justified.

CONCEPTS

Benefits
Costs
Credit
Credit Application
Credit History
Credit Report
Profit
Revenue
Risk

OBJECTIVES

- Identify the benefits and costs of good and bad credit histories.
- Understand how an applicant's credit history affects risk faced by lenders and, thus, their potential profits.
- Use the four Cs of credit to identify and define the characteristics of applicants used by lenders to decide whether to grant credit, and identify ways that they might use those characteristics to maintain their personal credit-worthiness.

LESSON DESCRIPTION

In this lesson, students discuss the benefits and costs of good and bad credit histories from the perspectives of borrowers and lenders. Acting in groups, the students examine the loan applications and credit reports of fictional credit applicants to determine the benefits and costs that the particular applicant might pose for a lender and to reach a decision about whether they would lend money to the applicant. This exercise will be followed by a discussion of the decisions reached by the students and the justification for those decisions. The teacher presents the students with the Cs of credit: character, capacity, capital, and collateral. Then the students discuss how they might ensure their future credit-worthiness as measured by the Cs. The students see that their decisions to maintain good credit and act as responsible borrowers make them more attractive to prospective lenders by

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potentially reducing the costs and increasing the benefits (profits) that they provide to the lender.

TIME REQUIRED

♦ Two fifty-minute class periods.

MATERIALS

One set of Activities 36 through 39 for each group of students

One copy of Activity 40 for each group of students (optional)

One copy of Activities 41, 42, and 43 for each student

Chalkboard or Overhead Projector

PROCEDURE

1. Explain that credit is a form of trust between lenders and borrowers and that lenders want to choose only trustworthy or (credit-worthy) applicants. Since there are many applicants, lenders usually have lots of alternative options for lending.

2. Point out that lenders are in business to make a profit, which means that they want to take in more money in revenue than they pay out in costs. Borrowers who do not repay on time or who fail to pay all or a portion of their debt increase lender costs, reducing lender profit, and so are not attractive to lenders.

3. Explain that lending involves a lot of risk on the part of the lender.

4. Define risk as uncertainty of repayment.

5. Explain that people with poor credit histories represent more risk to lenders because if the borrower fails to repay, the lender's profits will be reduced. To accept the additional risk, lenders charge higher interest rates to people with poor credit histories.

6. Explain that lenders attempt to minimize risk by carefully evaluating potential borrowers' willingness and ability to repay. Borrowers can lower the risk they represent to lenders by making personal finance decisions that show their willingness and ability to repay.

7. Explain that lenders gather information about applicants' willingness and ability to repay from two principal sources: a credit application and a credit report. The credit application is usually a form filled out by the applicant. (The teacher might want to obtain sample credit applications from local lenders.) Credit reports come from credit bureaus that keep files on credit users and sell the information to lenders.

8. Explain that students will be acting as a lender for the following exercise.

9. Divide the class into four groups of at least five students.

10. Distribute copies of Activities 36 through 39 to each group. Briefly explain the information provided for each applicant. If desired, also distribute one copy of Activity 40 to each group.

11. Distribute a copy of Activity 41 to each student. Explain that banks use several characteristics to evaluate and choose among applicants. These are often referred to as the Cs of credit: capacity, character, capital, and collateral. Review the information sheet with the student and define the Cs as follows.

A. Capacity refers to having sufficient income to repay the loan as agreed, taking into consideration the debts that the applicant already has outstanding.

B Character refers to having a responsible attitude towards repaying credit and a past history of taking one's debts seriously.

C. Capital (not to be confused with the economic definition of capital) refers to the financial assets that could be sold to pay the debt should the borrower's income decline.

D. Collateral refers to the possibility that an item of value (possibly the item purchased

with the borrowed funds) could be promised to the lender if the loan is not paid or the possibility that a family member or friend of the borrower may promise to repay the loan if the borrower fails to do so.

17. Explain to the groups that they should read the credit application and credit report for the four applicants, taking notes on each. Explain that they can grant two loans. Give the groups time to examine carefully the loan applications and credit reports. The students should consider the strengths and weaknesses of each applicant and the benefits and costs of lending to each. Activity 40 can be used to record this information, if desired.

18. Have a spokesperson for each group report the strengths and weaknesses of each applicant, the likely benefits and costs of lending money to the applicant, and whether they would grant the loan.

19. Distribute Activity 42. Lead the class in a discussion of the benefits to a borrower of having a good credit history and the costs of having a poor credit history. Then discuss benefits and costs faced by lenders when they lend to persons with good and bad credit histories.

CLOSURE

Restate the central premise of the lesson, that an individual's credit history poses benefits and costs for both lenders and borrowers.

Explain that lenders are in business to make a profit and that borrowers with poor credit histories add to lender risk, thereby reducing the potential for profit. Such applicants are less attractive to lenders and must pay higher interest rates to borrow.

Explain that the purpose of the exercise was to have them recognize that the financial decisions people make have benefits and costs that affect their credit history and thereby make them attractive or unattractive to lenders. For each of the Cs of credit, lead a discussion requiring the students to indicate four or five things they should do or avoid doing as they get older that would make them more attractive to lenders. Put the students' ideas on the board or overhead projector.

EVALUATION

1. Tell the students that they are the assistants to a loan officer at a local bank. Distribute a copy of Activity 43 to each student, and explain that they must evaluate Anton Richardson as a loan applicant. Instruct the students to write a memo to the loan officer for whom they work. In the memo, they should evaluate the benefits and costs to the lender of the decision to recommend lending or not lending based on the capacity, character, capital, and collateral of the applicant.

2. Present the students with the three scenarios described below. For each, have the students indicate which of the Cs of credit would be most affected by the decision made and in what way the decision would present a cost or benefit on the applicants's credit history.

A. Jerry Smith is a college student. At the beginning of the school year in August, he rented an apartment and signed a one-year lease. When the school year ended in June he decided to move in with some friends for the summer to save on rent. He simply moved out of the apartment and told his landlord he would not be back and wouldn't be paying any more rent. Now Jerry has decided to apply for his first credit card. How might Jerry's decision to break his lease affect his credit card application? (Answer: Jerry's actions would affect the lender's assessment of his character and would present a cost to Jerry as lenders would suspect that he was not willing to keep his word when signing an agreement.)

B. Monica Council needs a newer car and has a little money saved to make a down payment. She also wants to take an expensive vacation with a friend. She owes almost the maximum on her two credit cards. Today she received in the mail an offer to get a pre-approved credit card with a debt limit that should be just enough to cover the costs of the vacation. She has decided to get the card and use it to take the vacation. What might this decision mean

when she tries to get the car loan? (Answer: Monica's actions will affect her capacity as she will be adding to her debt. This will provide a cost to her in that lenders in the future will notice that she is at the maximum on three credit cards already, and they may not be willing to provide her any additional credit.)

C. Andre Johnson started a new job about two years ago. Before receiving his first pay check he agreed to have 5 percent of his pay deducted and deposited directly into his savings account. Andre is planning to apply for a loan to buy some furniture for his apartment. How might his decision to have a regular savings plan affect his loan application? (Answer: Andre has improved his capital. His decision has benefits for his credit history. Lenders will know that if Andre has trouble paying the loan he can draw from his savings account to make the payments.)

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Have the students write a credit history on themselves using the Cs of credit as a guide. Ask the students to evaluate the benefits and costs of financial decisions they may have made in the past.

2. Obtain examples of loan applications from local lending institutions. Have the students complete the applications as best they can with the information they know about themselves. Then ask them to discuss how they might make themselves more attractive to lenders in the future.

3. Invite a loan officer to discuss how decisions are made regarding loans. Ask the visitor to come prepared to give examples of the most beneficial decisions that young people can make and the most costly things to avoid in building credit history.

PARENTAL INVOLVEMENT

1. Instruct students to take the information regarding loan applicants home. Have the student explain to their parents the decision that was reached, and have the parent indicate what she or he would have decided.

2. Ask the students to write business letters to their parent. The letters should be written as if the students are loan officers and the parents are loan applicants. The contents of the letters should include the benefits and costs to the lender of granting or denying the application as evidenced in the strengths and weaknesses of the applicant's credit history, contained in the credit application and credit report.

RESOURCES

Financial Responsibility (education kit). For price and ordering information, contact: Office of Public Responsibility, American Express Company, 200 Vesey Street, New York, NY 10285-4850.

Credit Education: Strategies for Success, Vol.1, 1994, 20 pp., free, National Coalition for Consumer Education, 434 Main St., #201, Chatham, NJ 07928 (201-635-1916). This publication highlights projects from 1991-1992 of the NCEE/AT&T Consumer Credit Education Fund. Includes useful strategies for developing and implementing consumer education programs along with descriptions of successful approaches for consumer credit education.

Credit Ready? Five Essential Lesson Before Starting to Use Credit, free, American Express Company, P.O. Box 4635, Trenton, NJ 08650-4635. This kit contains five self-contained learning capsules on credit with activity sheets and brief videos.

How to Use Consumer Credit Wisely (Teaching guide), 1991. For price and ordering information contact: International Credit Association, Publisher, 243 North Lindbergh Blvd., St. Louis, MO 63141-1757 (314-991-3030).

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ACTIVITY 36
COMPLETED LOAN APPLICATION AND CREDIT REPORT — APPLICANT 1

Loan Application

Personal Information:

(A)Applicant's Name:	James Paul Anderson	Date of Birth: 9-2-72
(S) Spouse's Name:	Judith Rice Anderson	Date of Birth: 9-29-73

Marital Status: (Please mark one)
single ____ married __xx__ widowed ____ divorced ____

Address:	704 Houser Street	Social Security #:	(A) 002-92-8976
City:	Leslietown		(S) 202-35-7653
State:	VA **Zip:** 24523		
Phone:	(703) 927-0909		

Dependents:	**Relationship:**	**Age:**
Sean Stuart Anderson	son	6 mos.

Education: (Record only your highest level of education attained)
(A) High School Diploma (S) High School Diploma

Employment: (List only the current jobs held by you or your spouse)
(A): Construction laborer (S): Housewife
Building Contractors, Inc.

Household gross annual employment income:	$22,500
Approx. net annual employment income:	$18,000
Other Income:	none

Housing Information:
Do you: own _____ rent __xx__ live with others _____?
Monthly mortgage or rent expense: $550

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ACTIVITY 36 (Continued)

Current Loans Outstanding: (List the lender, loan type, balance owed, monthly payment, and remaining period of loan)

1) First/Seventh Bank	Personal Loan	$1,960	$187	11 mos.
2) You Buy It Now	TV/Furniture	$3,000	$113	32 mos.

Credit Cards: (List the name of the lender, type of card, current balance outstanding, typical monthly payment)

1) First/Seventh Bank	VIDA Card	$2,500	$45

References: (You must list in the designated order: your current employer, previous employer, and nearest relative not living with you)

1) Samantha Sternwell	Building Contractors, Inc.	(703) 927-7623
2) Jason Briddet	Skyscrapers, Incorporated	(703) 937-8354
3) Martha S. Anderson	Leslietown, VA	(703) 927-0098

Purpose of loan: We would like to buy a new car. Our current car is not reliable and needs repair. We would like to borrow $8,000 for four years and think we could afford the monthly payment of $194.

Credit Report

James P. and Judith Anderson

Financial Information:	**Item**	**Balance/Value**
Checking Account(s):	First/Seventh Bank	$3,000
Saving Account(s):	First/Seventh Bank	$2,000
Investments:	none	
Real Estate:	none	

Reference Information:

Landlord:	Always pay rent on time. Excellent tenant. Good neighbor to others in building.
First/Seventh Bank:	New customer but timely with payments. They took out a personal loan last month, have had their credit card for six months, and have been paying the minimum on their balance each month.
You Buy It Now:	Recently opened their account. Timely payments so far.

ACTIVITY 37
COMPLETED LOAN APPLICATION AND CREDIT REPORT — APPLICANT 2

Loan Application

Personal Information:
(A) Applicant's Name: Tiffany Deligh Date of Birth: 1-15-70
(S) Spouse's Name: Date of Birth:

Marital Status: (Please mark one)
single __xx__ married _____ widowed _____ divorced _____

Address: 9191 Edgemare Drive Social Security #: (A) 778-90-6732
City: Leslietown (S)
State: VA **Zip:** 24523
Phone: (703) 927-1112

Dependents: **Relationship:** **Age:**
none

Education: (Record only your highest level of education attained)
(A) Bachelor of Science in Marketing (S)
University of Leslietown

Employment: (List only the current jobs held by you or your spouse)
(A): Advertising Executive (S):
Billboards Galore

Household gross annual employment income: $38,000
Approx. net annual employment income: $30,000
Other Income: $2,000
You Sell It -- We'll Advertise It
(Personal Business)

Housing Information:
Do you: own __xx__ rent _____ live with others _____
Monthly mortgage or rent expense: $982

ACTIVITY 37 (Continued)

Current Loans Outstanding: (List the lender, loan type, balance owed, monthly payment, and remaining period of loan)

1) Second/Sixth Bank	Personal Business	$9,000	$207	57 mos.
2) Second/Sixth Bank	Auto	$240	$246	1 mos.
3) Wildcat Lenders	Education	$19,500	$348	67 mos.

Credit Cards: (List the name of the lender, type of card, current balance outstanding, typical monthly payment)

1) Second/Sixth Bank	VIDA Card	$8,500	$125
2) Second/Sixth Bank	Charge-It-Master	$5,000	$ 75

References: (You must list in the designated order: your current employer, previous employer, and nearest relative not living with you)

1) Hayward Stephens	Billboard Galore	(803) 937-9998
2) no previous employer		
3) Ronald Deligh	Winston, CA.	(909) 843-1121

Purpose of loan: I would like to buy a new car. I am about to pay off my current car and don't want it anymore. If I borrow $28,000 for five years, my payment would be $580 per month and I could get a Corvette.

Credit Report

Tiffany Deligh

Financial Information:	**Item**	**Balance/Value**
Checking Account(s):	Second/Sixth Bank	$ 500
Saving Account(s):	Second/Sixth Bank	$ 1,000
Investments:	IMF Mutual Funds	$ 5,000
Real Estate:	9191 Edgemare Drive	$10,000*

*value of home less what is owed on its mortgage

Reference Information:

Mortgage Holder:	Frequently late making payments. Currently, behind one monthly mortgage payment.
Second/Sixth Bank:	Has two outstanding loans and two credit cards with our bank number. She has been late with her payments in the past. Currently, up to date with both of her loan payments. However, her credit cards are at their maximum credit limit and she has been paying the minimum payment on her balance owed.
Wildcat Lenders:	Always pays on time.
Ronald Deligh:	Is willing to cosign on a loan for his daughter.

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ACTIVITY 38
COMPLETED LOAN APPLICATION AND CREDIT REPORT — APPLICANT 3

Loan Application

Personal Information:

(A)Applicant' s Name: Claudette Ransdia Date of Birth: 12-08-53
(S) Spouse' s Name: Landon H. Ransdia Date of Birth: 8-01-54

Marital Status: (Please mark one)
single _____ married __xx__ widowed _____ divorced _____

Address: 5608 Uptown St. Social Security #'s: (A) 209-96-1746
City: Leslietown (S) 207-33-7330
State: VA Zip: 24533
Phone: (703) 937-1990

Dependents:	**Relationship:**	**Age:**
S. Olivia Ransdia	daughter	16
John S. Ransdia	son	13
Erin E. Ransdia	daughter	12

Education: (Record only your highest level of education attained)
(A) Juris Doctor (S) Master of Arts in Education
James Madison University University of Wyoming

Employment: (List only the current jobs held by you or your spouse)
(A): Attorney (S) Teacher
Jones, Barnett, & Cline Leslie County Middle School
Attorneys at Law

Household gross annual employment income: $95,000
Approximate net annual employment income: $71,500
Other Income: none

Housing Information:
Do you: own __xx__ rent _____ live with others _____
Monthly mortgage or rent expense: $1,250

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ACTIVITY 38 (Continued)

Current Loans Outstanding: (List the lender, loan type, balance owed, monthly payment, and remaining period of loan)

1)	Leslietown Bank	Auto	$ 4,300	$145	33 mos.
2)	Leslietown Bank	Auto	$ 8,000	$247	38 mos.
3)	Leslietown Bank	College	$21,000	$293	93 mos.
4)	Leslietown Bank	Motor Home	$26,000	$587	57 mos.

Credit Cards: (List the name of the lender, type of card, current balance outstanding, typical monthly payment)

1)	Leslietown Bank	VIDA	$ 250	in full
2)	Leslietown Bank	Charge-it-Master	$ 750	in full
3)	AmeriPlan Bank	Explorers	$ 6,750	$1,000

References: (You must list in the designated order: your current employer, previous employer, and nearest relative not living with you)

1)	(A) Reginald Jones	Jones, Barnett, & Cline Attorneys At Law	(703) 599-4325
	(S) Janis Franken	Leslie County Schools	(703) 927-4443
2)	(A) John Becker	McKenzie, Breakman, and Becker, Inc.	(703) 929-2929
	(S) No previous employer		
3)	Mia Ransdia	Band, KY	(502) 224-2224

Purpose of loan: We would like to buy a boat. We vacation every summer at the lake and the kids like to water ski. We would like to borrow $10,000 for seven years and think we could afford the monthly payment of $174.

Credit Report

Landon H. and Claudette Ransdia

Financial Information:	**Item**	**Balance/Value**
Checking Account(s):	Leslietown Bank	$ 2,500
Saving Account(s):	Leslietown Bank	$ 1,000
	AmeriPlan Bank	$ 4,000
Investments:	AmeriPlan Fund	$22,000
	Digitec Corp. Stock	$16,000
Real Estate:	5608 Uptown Street	$67,000*

*value of home less what is owed on its mortgage

Reference Information:

Mortgage Holder: Always pay mortgage on time. We have been doing business with this couple for 20 years.

10.

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ACTIVITY 38 (Continued)

Leslietown Bank: Currently, we have four loans and two credit cards with the applicant. They have never been late with a payment in 20 years. Their credit cards are always paid off in full each month.

AmeriPlan Bank: Credit card balance fluctuates between $8,000 and $0 each year with the highest balances in late summer and lowest in early spring.

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ACTIVITY 39
COMPLETED LOAN APPLICATION AND CREDIT REPORT — APPLICANT 4

Loan Application

Personal Information:

(A) Applicant's Name:	Mr. Rhett Willis	**Date of Birth:**	11-14-55
(S) Spouse's Name:		**Date of Birth:**	

Marital Status: (Please mark one)
single _____ married _____ widowed _____ divorced __xx__

Address:	14 Town St.	**Social Security #:**	(A) 402-48-3278
City:	Leslietown		(S)
State:	VA	**Zip:** 40533	
Phone:	(883) 927-3345		

Dependents:	**Relationship:**	**Age:**
Mary Jo Willis	daughter*	11
Melanie Willis	daughter*	9

*Mr. Willis's daughters live with their mother who receives $450 in child support each month from their dad.

Education: (Record only your highest level of education attained)
(A) Associate's Degree (S)
Leslietown Community College

Employment: (List only the current jobs held by you or your spouse)
(A) General Electrician (S)
Self-employed

Household gross annual employment income:	$35,000
Approximate net annual employment income:	$28,000
Other Income:	none

10

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ACTIVITY 39 (Continued)

Credit Report
Mr. Rhett Willis

Financial Information:	**Item**	**Balance/Value**
Checking Account(s):	Second/Sixth Bank	$1,250
	Second/Sixth Bank	$2,900
Saving Account(s):	Second/Sixth Bank	$ 500
Investments:	None	
Real Estate:	None	

Reference Information:

Landlord:	Mr. Willis has been a tenant for four years. He always pays his rent although he has been late a couple times in the last six months.
Second/Sixth Bank:	Mr. Willis has been a long-standing customer. Mr. Willis always pays his automobile loan on time. His credit cards have outstanding balances but he has made payments on them in a timely fashion.
First/Seventh Bank:	Mr. Willis always pays his auto loan on a timely basis.
Clarence Mims:	Mr. Willis was a faithful and dedicated employee for 15 years before he resigned six months ago to start his own business. He buys equipment and supplies from us and always pays on time.
Thomas Willis:	Cannot cosign on a loan. He is elderly and has a limited, fixed income.

ACTIVITY 40
APPLICANT SUMMARY SHEET

Loan Applicant _____

What information does the applicant's credit application and credit report tell you about their:

Strengths?

Weaknesses?

What are the potential benefits of lending money to this applicant?

What are the potential costs and risks of lending money to this applicant?

Would you lend money to this applicant?

YES ____ **NO** ____

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ACTIVITY 41
THE Cs OF CREDIT

In evaluating a credit application, lenders consider the "Cs" of credit:

1. ***Capacity** is the income available to make repayment.* Having a substantial income, having the same job for a number of years, and not having a lot of other debts suggest a strong financial capacity to repay. Capacity relates to the ability to pay for the loan.

2. ***Character** involves your honesty and reliability in meeting financial responsibilities.* Your previous credit history indicates how highly you value paying bills on time. Are you the kind of person who takes debts seriously and pays all debts on time and in full? Character relates to the willingness to pay for the loan.

3. ***Capital** is a measure of your financial worth.* Questions about assets (home ownership, stocks, savings accounts) and liabilities (balance due on present credit accounts) reveal whether you have the funds to pay all your loans, including the one you are seeking, should your income drop. In other words, will you have more debt than you can handle if you receive the sought after loan and you lose some or all of your income? Capital relates to assets that might be used to cover the loan should income (capacity) be reduced.

4. ***Collateral** is property offered and pledged to secure repayment of a loan and subject to seizure should the borrower default.* It makes good sense for a lender to rely more on an automobile put up as collateral than on the smiling face of a credit applicant. Should the debtor later default, the automobile would be sold and the proceeds applied against the loan. Included under collateral would be a promise from a family member or friend of the borrower to repay the loan if the borrower fails to do so. This is called cosigning.

ACTIVITY 42
YOUR CREDIT HISTORY: BENEFITS AND COSTS

Your credit history is derived from information you supply on a loan application as well as from your credit report (obtained from a credit reporting agency which compiles information supplied by your credit grantors regarding your account activity).

Benefits of making financial decisions that result in a good credit history:

1. Obtaining future credit can be quick and easy.
2. You will have many more lenders to choose from since most will be interested in lending money to you.
3. Your costs of borrowing will be lower because you can shop among many lenders and can choose those with lower interest rates.
4. Positive information stays in your credit history forever, continuing to build and enhance your credit worthiness.
5. What other benefits might result from having a good credit history?

Costs of making financial decisions that result in a poor credit history:

1. Obtaining future credit can be difficult and time consuming, and credit may not be available at all.
2. You will have few lenders to choose from since most will not be interested in lending to you.
3. Your costs of borrowing will be higher because you cannot shop among many lenders and choose those with lower interest rates.
4. Negative information stays on your record for seven years.
5. What other costs might result from having a poor credit history?

Benefits of lending to applicants that have a good credit history:

1. Granting credit is less time consuming and costly.
2. Profits will be enhanced as revenue (interest) will be paid on time.
3. Risk of nonpayment will be reduced.
4. What other benefits might result from lending to people with a good credit history?

Costs of lending to applicants that have a poor credit history:

1. The application process for borrowers with poor credit histories is more complicated and time consuming and, therefore, more costly for lenders.
2. The costs of collecting and servicing the loan will increase, reducing profits.
3. Some loans will not be fully repaid, thereby reducing profits.
4. What other costs might result from lending to a person with a poor credit history?

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ACTIVITY 43
EVALUATION EXERCISE

Loan Application

Personal Information:
(A)Applicant' s Name: Anton Richardson Date of Birth: 02-20-60
(S) Spouse's Name: Date of Birth:

Marital Status: (Please mark one)
single ____ married ____ widowed __xx__ divorced ____

Address: 832 Bell Street, Condo #3 Social Security #: (A)123-45-6789
City: Leslietown (S)
State: VA **Zip:** 40533
Phone: (703) 927-4775

Dependents: **Relationship:**
Erin Mae Richardson daughter

Education: (Record only your highest level of education attained)
(A) B.S. in Finance (S)
University of Leslietown

Employment: (List only the current jobs held by you or your spouse)
(A) Real Estate Broker (S)
The House Finders, Inc.

Household gross annual employment income: $120,000
Approximate net annual employment income: $ 92,600
Other Income: $ 2,500 from real estate investment
Lake Edge Apartments

Housing Information:
Do you: own __xx__ rent _____ live with others _____
Monthly mortgage or rent expense: $600

Current Loans Outstanding: (List the lender, loan type, balance owed, monthly payment, and remaining period of loan)

1) First/Seventh Bank	Auto	$8,300	$ 223	44 mos.

Credit Cards: (List the name of the lender, type of card, current balance outstanding, typical monthly payment)

1) Second/Sixth Bank	Charge-it-Master	$2,500	$200
2) Second/Sixth Bank	Explorer Card	$1,000	$100

ACTIVITY 43 (Continued)

References: (You must list in the designated order: your current employer, previous employer, and nearest relative not living with you)

1)	Self-employed		
2)	Clarence Jones	Leslietown Electric Supply	(803) 937-0100
3)	Thomas Willis	Leslietown, VA	(803) 927-4843

Purpose of loan: My new business is starting to become prosperous, and I need a van to haul tools and supplies. I have been using my car, and it is just not up to the task. It also looks more professional to have a van. I would like to borrow $14,000 for four years and feel I could afford the monthly payment of $335. If necessary, I could take the loan for five years to lower the monthly payment to $276.

Credit Report

Anton Richardson

Financial Information:	**Item**	**Balance/Value**
Checking Account(s):	First/Seventh Bank	$ 1,250
	Second/Sixth Bank	$ 650
Saving Account(s):	First/Seventh Bank	$ 1,900
	Second/Sixth Bank	$ 400
Investments:	None	
Real Estate:	832 Bell Street	$18,000*
	Lake Edge Condominiums	$10,000*

*value of home and apartments less what is owed on each mortgage

Reference Information:

Mortgage Holder: Mr. Richardson is currently one payment behind in his mortgage. He is often late with his payment and one month will make no payment and then make two payments the next month.

First/Seventh Bank: He is frequently late in his payment of his loan. Currently, he is two payments behind. He also has a credit card with us that has a debt of $7,500. He is 25 days late in this payment.

Business Bankers: Mr. Richardson had a previous business partnership loan with Dick Arnold. Mr. Arnold left town and has not carried his share of this outstanding loan. As the situation stands right now, Mr. Richardson is paying off that business debt. He has not always been timely with his payments. Currently, this loan is up-to-date.

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ACTIVITY 43 (Continued)

Second/Sixth Bank:	Mr. Richardson is current with his real estate investment loan. However, he is occasionally late with his payment. His credit card has reached its maximum debt limit. He is one credit card payment behind.
Walker Johnson:	Due to the nature of Mr. Richardson's work, his income fluctuates drastically, with some months doing very well and others with little or no income as no homes have been sold.
Michelle Austin:	Mr. Richardson left Financial Solutions on unpleasant terms. He borrowed $12,000 from our company and has not repaid it.
Littaly Richardson:	Mr. Richardson's father will not cosign on a loan with his son.

LESSON NINE

WHAT WORKS FOR US!

INTRODUCTION

Purpose: In this lesson, students use the economic concepts of opportunity cost and trade-offs to help a young married couple adjust their spending plan and build a fund for a down payment on a new car. Through this activity, they learn that trade-offs occur whenever people make decisions and that recognition of opportunity cost can aid in decision making.

Background: A spending plan is an outline of planned income and expenditures for a time period. Spending plans are essential for most people to meet long- and short-term financial goals. When developing a spending plan, the personal financial planner incorporates both fixed and variable expenses which, in total, equal planned income. Saving is considered an expenditure in a spending plan, and the rule "pay yourself first" alludes to the practice of making saving deposits first before making other expenditures. This is the only sure way to meet the desired goals for which the savings are needed! When the "pay yourself first" rule is used, savings are subtracted from income first. Then other fixed expenses (those which cannot be easily changed and which remain essentially the same from month to month) are subtracted. Variable expenses (those which can be controlled and which change from month to month) are then incorporated into the spending plan. Focusing on opportunity cost can aid decision making. Opportunity cost is the highest valued forgone alternative. In the case of variable expenses, the opportunity cost is the highest valued forgone use of the funds. Each category of variable expense is taken in turn according to its opportunity cost until income is exhausted. A key benefit of focusing on the opportunity cost of a decision is to affirm that the decision made was truly the best alternative.

Limited funds will not allow spending for all expense categories so trade-offs have to be made. Trade-offs occur when a little more spending occurs in one category in exchange for a little less in another. One trade-off in spending plans involves making more (or less) progress toward future financial goals in exchange for more (or less) current spending. Regrettably, many people do not "pay themselves first." As a result, saving is relegated to what is left over at the end of the month. Thus, saving is viewed by default as having the highest opportunity cost of all competing uses of funds. This explains why many people fail to save sufficiently.

CONCEPTS

Fixed Expenses
Income
Opportunity Cost
Saving
Spending Plan
Trade-offs
Variable Expenses

OBJECTIVE

♦ Apply trade-offs and opportunity cost to the development of a spending plan.

LESSON DESCRIPTION

The scenario for this lesson involves a young couple being interviewed by the host of a radio show, "What Works for Us," while the couple works on its spending plan. The lesson requires the students to role play a young couple developing a spending plan using the economic concepts of trade-offs and opportunity cost. The spending plan must adjust the young couple's pattern of spending to allow the couple to save an additional $250 per month in order to meet the goal of having a $3,000 down payment for a new car within one year. Then, working with the couple, the host develops a script and presents the 5-minute show to the class.

TIME REQUIRED

♦ Two fifty-minute class periods

MATERIALS

One copy of Activity 44 per group
Two copies of Activity 45 per group

BEST COPY AVAILABLE

LESSON NINE

One or two copies of Activity 46 per group
Calculators (one for each pair of students)

PROCEDURE

1. Divide the class into groups of three. Each group should have at least one boy and girl.

2. Explain that two members of each group will role play a young married couple, Anthony and Marcia. The third member will role play the host of a radio show, "What Works for Us." The radio show involves everyday people and the management of their personal finances. (You may assign roles within the groups or allow group members to make the decisions.)

3. Explain that Anthony and Marcia have a problem. They want a new car. However, they don't earn enough income to save for a new car while continuing to spend as much as they have been.

4. Tell the students that a spending plan could help Anthony and Marcia identify ways to reallocate income. A spending plan is a mechanism for allocating income across the many wants that exist.

5. Explain that each group will design a spending plan to help Anthony and Marcia accomplish their goal of saving $3,000 for a down payment on a new car during the next year.

6. Distribute Activity 44 to each group. Instruct the host of each group to read Activity 44 aloud.

7. Ask if anyone knows what the expression, "pay yourself first" means.

8. Explain that financial advisors often use this expression. It means that people should save before doing anything else. Point out that Marcia and Anthony have been practicing "pay yourself first" by having $100 withheld from their combined monthly pay.

9. Explain that Marcia and Anthony want to buy a new car. To do this, they need a $3,000 down payment. In order to have the down payment, they must increase their payments to themselves by an additional $250 a month.

10. Define fixed expenses as those that cannot be easily changed and which remain essentially the same dollar amount from month to month. Ask students for some examples. (house payment or rent, car payment, health insurance or car insurance premium)

11. Define variable expenses as those that can be controlled and that change from month to month. Ask students for some examples. (food expenses, utilities, clothing expenses, entertainment expenses)

12. Explain that Anthony and Marcia understand that they can do little to change their fixed expenses so the additional savings must come from variable expenses.

13. Distribute a copy of Activity 45 to each student. Discuss:

   A. Why are housing and social security taxes fixed expenses? (These cannot easily be changed, and they remain relatively constant in dollar amount from month to month.)

   B. Why are food and clothing variable expenses? (These expenditures can be controlled/changed from month to month.)

14. Discuss any items on the Monthly Spending Plan students don't understand.

15. Define opportunity cost as the highest valued forgone alternative when a decision is made.

16. Explain that any time people make choices they incur opportunity costs.

17. Choose a student, and ask if she/he could have a 12 oz. container of orange juice, apple juice, or grape juice, which would she/he choose. Ask what his or her second choice would be.

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18. Explain that by choosing the first beverage, the student gave up having his/her second choice. The second choice is the highest forgone alternative or opportunity cost.

19. Explain that focusing on the next best alternative (opportunity cost) allows a decision maker to be sure that the decision reached is really the "best" alternative.

20. Explain that in Anthony and Marcia's case, the opportunity cost of deciding to pay themselves first with an additional $250 and still meet their fixed expenses is the forgone benefits of some variable expense items they give up. When $250 is subtracted from their planned income for variable expenses, they have only $1,085 remaining.

21. Explain that allocating this $1,085 among the variable expense categories requires trade-offs. A trade-off involves giving up a little of one thing in order to gain a little more of something else. In Marcia and Anthony's case, they give up some spending in one category in order to have the same or more spending in another category. For example, if Marcia and Anthony decide to reduce their spending on food at restaurants by $40 in order to continue spending $40 on clothing, they have made a trade-off among categories.

22. Give "Anthony and Marcia" time to work on a revised spending plan. Remind students that a spending plan is partially based on past behaviors, and they should use the previous month's spending as a guide.

23. Instruct students to record their decisions on Activity 45 in the column labeled "After."

24. Explain while those role playing Anthony and Marcia are working on revised spending plans, the hosts of "What Works for Us" should be taking notes and preparing to write the script for the show. Activity 46 may be used for this purpose.

25. When the spending plans are complete, students in each group should work together to finalize the script for the radio show.

26. Distribute additional copies of Activity 46 as needed.

27. Circulate among the class to ensure that the scripts incorporate the concepts of opportunity cost and trade-offs.

28. Allow each group to present its radio show. They should state specifically where they reduced variable spending and the trade-offs involved. Instruct them to follow the steps outlined in Activity 46.

CLOSURE

After the students have finished presenting their radio shows, remind them that there was no single right answer. There were various ways for Anthony and Marcia to achieve their goal. Lead a discussion of the decisions made by the students, focusing on the different trade-offs made by the groups.

To reinforce understanding of opportunity cost, tell the students that they are to receive an additional $10 per month in allowance. Ask them to suggest what they would do with the money. Then, explain that what they have chosen could be viewed as the opportunity cost of what they had been doing before the allowance increase. That is, it was the next best item at the top of their waiting list. The view stems from the definition of opportunity cost as the next best alternative forgone. Remind them that they can use this same way of thinking to determine if the decisions they make are indeed the best alternative.

EVALUATION

1. Suggest that students set a goal of saving 25 percent of their income (allowance, work around the house, etc.) so they may have their own spending money for a family vacation planned for next summer. Ask them to decide where they would cut their current spending pattern to reach the goal. Ask them to identify the opportunity costs and trade-offs of their decisions to cut spending. Make sure they understand that identifying opportunity cost provides a check as to whether the "best" decision was reached.

BEST COPY AVAILABLE

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Ask the students to share examples of times they have saved to achieve a goal. Have them enumerate strategies they employed to accumulate the money they needed for their purchase and the opportunity cost of each saving decision.

2. Invite a financial planner or corporate accountant to speak to the class about the role of spending plans in achieving both personal and business objectives and the opportunity cost of each decision in the plan.

PARENTAL INVOLVEMENT

♦ Ask the students to share a financial goal and spending plan with their parents. Have them explain to their parents the trade-offs of their decisions. Then the students should ask their parents how their decision might be different based on the trade-offs from the parent's point of view.

RESOURCES

Danes, S.M. (1993). Children and Money: Allowances and Alternatives, HE-FO-6117-C. For price and ordering information, contact: Minnesota Extension Service, University of Minnesota, St. Paul, MN.

Danes, S.M. (1992). Teaching Children Money Habits for Life, HE-FO-6116. For price and ordering information, contact: Minnesota Extension Service, University of Minnesota, St. Paul, MN.

Teenage Consumers: Teaching Your Children How to Save & Spend, free, American Express Company, P.O. Box 4635, Trenton, NJ 08650-4635. This kit provides strategies and activities parents and teachers can use to instill effective saving and spending behaviors in children.

Money Skills: 101 Activities to Teach Your Child About Money, 1992, 13 pp. For price and ordering information, contact: Career Press, 180 Fifth Avenue, Hawthorne, NJ 07507 (800-227-3371). Activities for children ages 3 to 12 to help them become responsible users of money.

Penny for Your Thoughts: Fun Activities for Children To Do With Their Parents To Learn About Money, 1994. Includes a workbook with 30 activities and a 17 x 22 inch poster. For price and ordering information, contact: Center for Consumer Affairs, 929 N. Sixth Street, Milwaukee, WE 53203, 414-227-3250.

That's Life, (Budgeting Game) 1993. For price and ordering information, contact: National Foundation for Consumer Credit, 8611 Second Avenue, Silver Spring, MD 20910 (301-589-5600). Explains money and choices for students in grades 6-12.

Toward Being in Charge, 1994. For price and ordering information, contact: The Educational Development and Training Center, East Texas State University (800-356-2644). Budgeting for middle school students, includes two lesson plans, posters, and a transparency master to teach wise spending and saving.

ACTIVITY 44
WHAT WORKS FOR US!

"What Works for Us" is a weekly show on a local radio station. The five-minute show presents tips for personal financial planning by highlighting one example each week of how ordinary people manage their finances. As host of the show, you select an individual or family in the process of managing their money and describe for your audiences what they have done. This week's show will focus on decisions made to adjust a spending plan to meet a goal of saving an additional $250 per month for the down payment on a new car. You will observe the efforts of this week's guests, Anthony and Marcia. Then you will write a script with their assistance that will be used for your show.

FAMILY DESCRIPTION

Anthony and Marcia are a married couple who plan and manage their financial accounts to the best of their ability. They record their income and expenses conscientiously. They want a sound financial future and thus plan their saving and spending carefully. They have one child, Ashley, who is two years old. Anthony manages a local shoe store. Marcia recently graduated from college and is a manager trainee at a local bank. Their combined monthly income is $2,800.

Marcia and Anthony know that they will soon need another car because it is very difficult to manage with just one car when both are working. They wish to be able to purchase a new car in one year and want to have $3,000 saved as the down payment. They currently have $100 withheld from their paychecks to provide a fund for emergencies. They plan to have an additional $250 taken out for the next 12 months to make the down payment on the new car.

The couple has worked hard to provide an adequate lifestyle for themselves and their child. Their apartment is comfortable but certainly not lavish. One of the couple's top priorities is maintaining their health through diet and medical care. They eat sensible and healthy meals. Ashley is in need of medical attention from time to time, as are all small children. She also requires child care when Anthony and Marcia are both at work.

The couple has one loan outstanding — a student loan for some of Anthony's college expenses. Being mindful of how uncertain life can sometimes be, they faithfully carry health, life, disability, and renter's insurance. In addition, Marcia started saving for her retirement with a pension plan established through her employer. They view their insurance and pension contributions as essential. They are locked into their fixed expenses, but they have flexibility with their variable expenses.

ACTIVITY 45
MONTHLY SPENDING PLAN WORKSHEET

CLASSIFICATIONS	Before	After
Income		
Total income (both spouses work)	2,800	2,800
Expenses-fixed		
Housing	525	525
Health insurance	55	55
Life and disability insurance	50	50
Renter's insurance	10	10
Automobile insurance	80	80
Student loan	100	100
Savings (withheld)	100	350
Federal and state taxes	280	280
Social Security taxes	205	205
Pension fund (withheld)	60	60
Total fixed expenses	1,465	1,715
Expenses - variable		
Food/home	265	_____
Food/restaurant	85	_____
Utilities	155	_____
Automobile gas, oil, etc.	60	_____
Medical	50	_____
Child care	220	_____
Clothing	40	_____
Gifts and contributions	50	_____
Magazines/newspapers	40	_____
Home furnishings and appliances	40	_____
Personal care	50	_____
Entertainment	80	_____
Vacation	100	_____
Credit card	50	_____
Miscellaneous/personal	50	_____
Total variable expenses	$1,335	$1,085
Total expenses	$2,800	$2,800

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ACTIVITY 46
"WHAT WORKS FOR US" SCRIPT

INTRODUCTION

HAVE YOU EVER SAVED FOR A GOAL SUCH AS A NEW CAR OR VACATION? TODAY ON "WHAT WORKS FOR US" WE ARE FEATURING THE EXPERIENCES OF MARCIA AND ANTHONY WHO WANT TO BUY A NEW CAR. THANKS FOR TUNING IN.

MARCIA AND ANTHONY PRACTICE THE "PAY YOURSELF FIRST" APPROACH TO SAVING. THIS MEANS THAT THEY HAVE THE AMOUNT THEY WANT TO SAVE TAKEN OUT OF THEIR PAY BEFORE THEY RECEIVE THEIR CHECKS. TO BUY THE NEW CAR, THEY WILL HAVE TO SAVE AN ADDITIONAL $250 PER MONTH FOR THE NEXT YEAR. HOW DID THEY DECIDE WHERE TO CUT THAT AMOUNT FROM THEIR SPENDING? THEY FOCUSED ON THE TRADE-OFFS AND OPPORTUNITY COST. HERE'S HOW!

1. Describe the cuts they made in their variable expenses.

2. Describe the opportunity costs of those cuts.

3. Describe the trade-offs they made in arriving at their decisions.

SUMMARY AND CONCLUSION:

SAVING FOR A GOAL CAN BE TOUGH. BUT, PAYING YOURSELF FIRST ENSURES THAT YOU PUT THE GOAL AHEAD OF OTHER THINGS. AND DON'T FORGET OPPORTUNITY COST AND TRADE-OFFS. THINKING ABOUT THEM HELPS YOU MAKE THE CUTS NECESSARY TO REACH YOUR GOAL. THINKING ABOUT THE OPPORTUNITY COST OF A DECISION PROVIDES AN ADDED CHECK TO SEE IF THE DECISION YOU MADE IS TRULY THE BEST ONE. GOOD LUCK AND TUNE IN NEXT WEEK.

LESSON TEN

AT THE MARGIN EDUCATION PAYS!

INTRODUCTION

Purpose: In this lesson, students use marginal benefits, marginal costs, and opportunity cost to make decisions about maximizing their own educational attainment. Decisions about education can be enhanced by focusing on the marginal benefits of increased education as indicated by income gains. The students will also focus on the marginal cost and opportunity cost of increased education and will see that, usually, marginal benefits exceed marginal cost.

Background: Decisions about educational attainment relate to personal finance in two areas: spending and financial responsibility. Education is costly. Better decisions about spending on education can be made by applying marginal benefits, marginal costs, and opportunity cost to the decision-making process. Financial responsibility may be enhanced through decisions related to attaining additional education because those with higher levels of education tend to have higher incomes and may be better able to provide for their own financial well-being and that of their families.

Data on mean income for persons with various levels of education indicate that those with higher levels of education have higher levels of personal income. Finishing high school, having some college course work (including technical or vocational diplomas), receiving a bachelor's degree, and pursuing advanced education and professional training all have a clear monetary benefit. Educational attainment is not without cost, however. Direct financial costs include tuition, books, and supplies. The major opportunity cost of additional education is the forgone income that could have been earned in lieu of attending school.

The data used in this lesson are average data extrapolated from government statistics. Individual experiences will differ from the averages portrayed by the data. In particular, the marginal cost data will be higher if a college student lives on campus. However, students can assume that generally it is possible to obtain post-secondary education at the average costs indicated by the data by attending a public institution near home. Further, these costs can be covered by various forms of financial aid. It is essential for students to recognize that the personal finance decision to attain additional education is enhanced through application of economic knowledge.

CONCEPTS

Expenditures
Income
Marginal Benefit
Marginal Cost
Opportunity Cost

OBJECTIVE

♦ Apply marginal benefits, marginal costs, opportunity cost, and net benefit to decisions related to spending.

LESSON DESCRIPTION

This lesson requires students to develop a 60-second video (or audio) public service announcement (PSA) focusing on the economics of decisions related to staying in high school and seeking post secondary education. The PSA format and script can be developed by the students, but the information conveyed must relate to the marginal benefits, marginal costs, opportunity cost, and net benefit of the decision to invest in education as measured by its effect on income and expenditures.

TIME REQUIRED

♦ Two fifty-minute class periods

MATERIALS

One copy of Activities 47, 48, 49, and 50 for each student

One copy of Activities 51, 52, and 53 for each group member

Calculators, if available (one for each group of students)

Video camera (or audio tape recorder)

Overhead projector (optional)

LESSON TEN

PROCEDURE

1. Explain that for the next two class periods the students will focus on the benefits and costs of getting a good education. Discuss:

   A. What are the benefits of graduating from high school? (better paying job, opportunity to enter junior college or college)

   B. What are the benefits of post-secondary education? (better paying job, greater opportunities for employment)

   C. What are the costs of post-secondary education? (tuition, books, housing, transportation, forgone earnings)

2. Explain that both monetary and non-monetary benefits and costs can be analyzed using the economics framework. Stress that they will be using the concepts of marginal benefit and marginal cost to analyze decisions.

3. Define marginal benefit as the additional benefit that would be obtained from one more unit of some good or service. In the case of education, it could be measured, among other ways, by the additional income per year that would result from one more year of education. Point out that this marginal benefit would occur for every year of their working life.

4. Distribute a copy of Activity 47 to each student.

5. Explain that, on average, the annual marginal benefit of graduating from high school is $7,714. Point out that this is the average for persons of all ages. So if someone worked for 45 years after graduation from high school, the total lifetime marginal benefit would be $447,130 (45 x $7,714). (Note: The time value of money is ignored to simplify the analysis.)

6. Explain that people use money and time to obtain additional education. Allocating money and time to education involves opportunity cost.

7. Define opportunity cost as the highest forgone alternative when a decision is made.

8. Explain that when people allocate money to additional education, they give up the next best use of that money. When people allocate time to education, they give up the next best use of that time. The value of the next best alternative use of their time is assumed to be the income they could earn if they weren't in school.

9. Define marginal cost as the additional cost of obtaining one more unit of some good or service. In the case of education it can be measured by the additional costs per year that result from obtaining one more year of education. These would include tuition and other costs as well as lost income. Point out that this marginal cost would occur for every additional year of schooling.

10. Distribute a copy of Activity 48 to each student.

11. Explain that the average marginal costs of tuition, books, and supplies for the first year of college is $2,804. Point out the annual cost for persons seeking additional levels of education. Explain that this would be the marginal cost of one more year of school at the various levels.

12. Remind students that the opportunity cost of additional education is the income that could have been earned had a person worked rather than attend school.

13. Distribute a copy of Activity 49 to each student.

14. Point out the income levels for persons age 18-24 with various levels of education.

15. Ask the students to estimate the opportunity cost of staying in high school for their senior year in order to graduate. ($15,260, which is the average income for someone age 18-24 who had less than four years of high school). NOTE: The dollar amounts in Activity 47 are different from those in Activity 49 because income levels for workers of all

ages are used in Activity 47 whereas only the 18-24 age group is used in Activity 49.)

16. Point out that combining the marginal cost of tuition and other costs with the opportunity cost of time spent in college (the income forgone while in college) provides a measure of the marginal cost of each year of a college education.

17. Explain that students will analyze the decision to obtain more education by determining the net benefit of more education.

18. Define net benefit as the marginal benefit minus the marginal cost of education. The net benefit is a measure of lifetime payoff from education.

19. Distribute a copy of Activity 50 to each student.

20. Explain that the calculations on the sheet provide an example of the net lifetime benefit for someone who decided to get an advanced degree after graduating from college.

21. Ask the students to share their reactions to the dollar figures in the example.

22. Ask them to think of ways their lives would be better if they had access during their lifetime to the $538,950 figure in the example.

23. Explain that students will use the data they now have to develop a public service announcement (PSA) directed at middle-school kids who are struggling with decisions about staying in school. This includes decisions about staying to obtain a high school diploma as well as going on for some type of post-secondary education.

24. Explain that a PSA is like a commercial. Instead of selling a good or service, a PSA sells an important idea.

25. Explain that a possible scenario for the PSA could be an interview with a student who just finished a lesson like this one, or a group of kids talking about their futures, or a middle-school student explaining what he or she has learned about additional education to a parent.

26. Encourage students to be creative as well as use their knowledge about marginal benefits and costs, opportunity costs, and net benefits.

27. Divide the class into three (or six) groups to develop their PSAs.

28. Instruct one (or two) group(s) to develop a PSA related to the value of obtaining a high school diploma. Distribute a copy of Activity 51 to the group(s). NOTE: While public high school is essentially tuition-free there are costs for books and supplies. Provide this group with an estimate of those annual costs.

29. Instruct one (or two) group(s) to develop a PSA related to the value of getting two years of college in addition to a high school diploma. Distribute a copy of Activity 52 to the group(s).

30. Instruct one (or two) group(s) to develop a PSA related to the value of getting four years of college. Distribute a copy of Activity 53 to the group(s).

31. Explain the students should work in their groups to complete any necessary calculations and develop the script for their PSAs.

32. Have each group present its PSA to the class. If possible, video (or audio) tape the presentations.

CLOSURE

Lead a brief discussion of the definitions of marginal benefits, marginal costs, opportunity cost, and net benefit.

Ask the students to describe how these concepts helped them better understand the decisions they will soon be making concerning their own education.

Remind the students that they have only focused on the monetary aspects of getting an education. Lead a brief discussion of other non-financial

benefits and costs of getting additional education beyond high school.

EVALUATION

1. Ask students to determine the lifetime marginal benefit of four years of college education versus simply graduating from high school, assuming that the person works 43 years after graduating from college. The answer is $780,708. [Subtract $21,852 (annual mean income for a high school graduate) from $40,008 (annual mean income for a college graduate) and multiply by 43.]

2. Ask students to determine the marginal financial cost of four years of college education versus discontinuing formal education after graduating from high school. The answer is $12,928. [$2,804 + $2,804 + $3,660 + $3,660]

3. Ask students to determine the opportunity cost of time associated with four years of college education rather than simply graduating from high school. The answer is $70,524. [$17,631 x 4]

4. Ask students to determine the net benefit of four years of college education versus ending their formal education after high school. The answer is $697,256. [$780,708 - $12,928 - $70,524]

SUGGESTIONS FOR FURTHER ENHANCEMENT

1. Have the PSA tapes presented to other classes at the school or arrange to have the best of them shown on the public access channel on your local cable TV system.

2. Ask the students to contact the admissions offices of local colleges and vocational schools to determine the likely annual expenditures for tuition, books, and supplies at those institutions. Recalculate the net benefit of attending those schools.

PARENTAL INVOLVEMENT

♦ Make additional copies of the students' PSAs to send home to parents.

♦ Ask parents to volunteer to address the class about decisions they made concerning their own education and how those decisions have affected their incomes and opportunities.

RESOURCES

Consumer Economics: Decision-Making, 1990, 75 pp. For price and ordering information contact: Center for Economic Education, University of Florida, 186 Norman Hall, Gainesville, FL 32611. Eleven lesson plans examine the decision-making process in various situations. Contains reproducibles. Easily adapted to most locales.

That's Life, (Budgeting Game) 1993. For price and ordering information contact: National Foundation for Consumer Credit, 8611 Second Avenue, Silver Spring, MD 20910 (301-589-5600). Explains money and choices for students in grades 6-12.

Choices and Decisions, 1991. For price and ordering information contact: Visa Fulfillment, P.O. Box 100, St. Cloud, MN 56302 (800-235-3580). Multimedia instruction package with a 12-lesson curriculum containing paper-based activities, a videodisc game and five computer-based activities.

"The Fifteenth Annual Salary Survey," *Working Woman Magazine*, January, 1995. Each January, *Working Woman Magazine* provides information on what women earn in various jobs and careers.

 From *Personal Finance Economics, 6-8: Money in the Middle*, © National Council on Economic Education, New York, NY

ACTIVITY 47
MARGINAL BENEFIT DATA

Annual Income for Persons* with Various Levels of Education

	Less than 4 Years of High School		4 Years of High School		1 - 3 Years of College		4 Years of College		5 or More Years of College
Annual Income	$14,138		$21,852		$26,706		$40,008		$54,886
Annual Marginal Benefits		$7,714		$4,854		$13,302		$14,878	

*Average (mean) income for all workers over age 18. (Figures are for 1996 adjusted from 1990 data using an assumed rate of increase of 2.5% per year.)

SOURCE: Kominski, R. and Adams, A. "Educational Attainment in the United States; 1991-90." U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Population Characteristics (Series P20, #462).

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ACTIVITY 48
MARGINAL COST DATA

Tuition and Other Costs* to Attend Post secondary School for One Year

Vocational/ Technical Schooling	First 2 Years of College	Second 2 Years of College	Graduate Degree Work
$1,312	$2,804	$3,660	$3,011

*Average (mean) expenditures for tuition, books, supplies, etc. excluding room and board. (Figures are for the 1995-96 academic year adjusted from 1990-91 data using an assumed inflation rate of 6% per year for these costs.)

SOURCE: Sutterlin, R. and Kominski, R. "Dollars for Scholars: Post secondary Costs and Financing, 1990-91." U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Household Economics Studies (Series P70, #39), p. 17.

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ACTIVITY 49
OPPORTUNITY COST OF GOING TO COLLEGE

Annual Benefit (Income) for Persons Ages 18-24* by Level of Education

Less than 4 Years of High School	4 Years of High School	1 - 3 Years of College**	4 Years of College	5 or More Years of College
$15,260	$17,631	$17,578	$25,074	N/A

*Average (mean) income for all year-round full-time workers ages 18-24. (Figures are for 1996 adjusted from 1992 data using an assumed rate of increase of 2.5% per year.)

**This figure is lower than for those with four years of high school because a large proportion of these people are still in school and not working full time.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Consumer Income, 1992 (Series P60, #184).

ACTIVITY 50
NET BENEFIT (EXAMPLE)

The calculations below describe the net benefits of an additional two years of schooling after graduating from college.

1. Marginal Benefit ___$14,878*___ per year for
___40___ years (age ___25___ to age ___65___) equals $595,120

*from Activity 47

Less

2. Marginal Cost ___$3,011*___ per year for
___2___ years equals $ 6,022

*from Activity 48

and

3. Opportunity Cost ___$25,074*___ per year for
___2___ years equals $ 50,148

*from Activity 49

For a net benefit (47 — 48 — 49) of: $538,950

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ACTIVITY 51
NET BENEFIT OF HIGH SCHOOL COMPLETION

The calculations below describe the net benefits of graduating from high school rather than dropping out two years early.

1. Marginal Benefit* ___$_____ per year for
   _____ years (age _____ to age _____) equals $

   *from Activity 47

Less

2. Marginal Cost* ___$_____ per year for
   _____ years equals $

   *from Activity 48

and

3. Opportunity Cost* ___$_____ per year for
   _____ years equals $

   *from Activity 49

For a net benefit (47 — 48 — 49) of: $

ACTIVITY 52
NET BENEFIT CALCULATION OF SOME COLLEGE

The calculations below describe the net benefits of going to college for a two year technical diploma after graduating from high school.

1. Marginal Benefit* $___$ per year for
   44 years (age 21 to age 65) equals $

   *from Activity 47

Less

2. Marginal Cost* $___$ per year for
   2 years equals $

   *from Activity 48

and

3. Opportunity Cost* $___$ per year for
   2 years equals $

   *from Activity 49

For a net benefit (47 — 48 — 49) of: $

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ACTIVITY 53
NET BENEFIT CALCULATION OF A COLLEGE DEGREE

The calculations below describe the net benefits of continuing for two more years to graduate from college after having two years of college completed.

1. Marginal Benefit* __$_____ per year for
   _42_ years (age _23_ to age _65_) equals $

   *from Activity 47

Less

2. Marginal Cost* __$_____ per year for
   _2_ years equals $

   *from Activity 48

and

3. Opportunity Cost* __$_____ per year for
   _2_ years equals $

   *from Activity 49

For a net benefit (47 — 48 — 49) of: $

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